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THE

AGRICULTURAL COLLEGE

OF

PENNSYLVANIA;

EMBRACING

The Catalogue for 1862, as also, a Succinct History of Agricultural Education in Europe and America, together with the circumstances of the Origin, Rise and Progress of the Agricultural College of Pennsylvania; as also a statement of the Present Condition, Aims and Prospects of this Institution, its Course of Instruction, Facilities for Study, Terms of Admission, &c., &c., &c.

DRAWN UP BY A COMMITTEE

APPOINTED FOR THIS PURPOSE BY THE BOARD OF TRUSTEES.

PHILADELPHIA:

W. S. YOUNG, BOOK AND JOB PRINTER, 52 NORTH SIXTH STREET.
1863.

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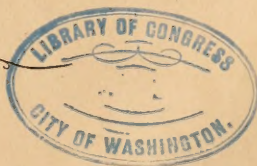
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AGRICULTURAL COLLEGES.

Historical.

The idea of educational institutions especially devoted to agriculture and the industrial arts, is of comparatively modern origin. Among ancient authors we find several very respectable attempts to lay down rules for agricultural practice, but the writers being wholly ignorant of science, were unable to give the rationale of the most simple facts in agriculture; and hence agricultural schools for instruction in agricultural principles were out of the question.

In modern times the interest manifested in agricultural education has grown with the development of modern science. In the first half of the eighteenth century a number of works upon agriculture appeared, in which the few faint glimpses of experimental science, at that time known, were used to illuminate agricultural practice.

AGRICULTURAL EDUCATION IN EUROPE.

As early as 1730, Wallerius was engaged in chemico-agricultural investigations in Sweden, while Jethro Tull was developing his system of practical farming in England; and in 1761, the former published a work (*Agriculturæ Fundamenta Chemica*) in which he sought to develop a system of manuring founded on the examination of the ashes of plants. Quesnay, in 1747, founded the Physiocratic School in France; the principal object of which was the dissemination of agricultural ideas. A little later, agricultural societies were founded in Switzerland, Saxony, and Hanover; and as the interest in the dissemination of agriculture increased, agricultural professorships were esta-

blished in the universities of Goettingen, (1769,) Giessen, Rostock, and Leipsic, (1778;) and soon after this, says a recent writer,* agricultural instruction was given in all the High Schools of the country. As yet, however, no agricultural schools had been founded.

THAER'S SCHOOL.

To the immortal Thaer is due the honor of first conceiving, and attempting to carry out, the idea of founding educational institutions especially devoted to instruction in agricultural science and practice.†

Not only did Thaer see the necessity of having a system of education developed to correspond to the wants of the farmer, but, with surprising acuteness, he discerned what should constitute the general principles according to which this system should be built up. In his principles of agriculture, (1809,) after dwelling upon the necessity of a knowledge of Botany, Zoology, and Chemistry, and other sciences, to an intelligent appreciation of agricultural practice, he goes on to remark, that "*it is then evident that agriculture ought to borrow from every science the principles which she employs as the foundation of her own.*" With these ideas he founded his agricultural school. An English traveller who visited it in 1820, says:—

"It comprised a model farm of 1200 acres, and a college for instruction. The education was partly theoretical, and partly of a practical description. The former was provided for by three Pro-

* Dr. Bérnbaum Lehrbuch der Landwirthschaft. Vol. I. P. 31.

† Albrecht D. Thaer was born in Hanover, Germany, 1752. He studied at the University of Goettingen about the time (1770) that Prof. Walther commenced his course of lectures on agriculture at that institution; and although he devoted himself, while a student, to the study of medicine, he doubtless saw enough of the disadvantages of attempting agricultural education in an old conservative institution with stereotyped habits, to satisfy him that a course of instruction so radically different from that of the university, as that of scientific and practical agriculture must be, could only be carried out properly in a new order of institution especially adapted to agricultural science and practice. About 1800 he started a small agricultural school at his native town, Celle, in Hanover, but in 1803 it was broken up by the invasion of the French. Soon after, at the urgent solicitations of the King of Prussia, (1804,) he went to Berlin and founded the Agricultural School, with model farm, (400 acres,) at Moeglin, about 20 miles from the Prussian capital. The disastrous defeat of the Prussian army at Jena, and the subsequent occupation of Berlin by Napoleon's troops, (1806,) for a time delayed Thaer's plans; but, in 1807, he opened his school with 10 students, and after the peace of Tilsit he had an uninterrupted success with his school and farm till near his death in 1828.

fessors, who lived upon the premises; one for mathematics, Chemistry and Geology; one for the veterinary art; and the third for Botany and the use of the various vegetable productions in the *materia medica* as well as for entomology. The practical instruction was communicated by an experienced agriculturist, who pointed out the method of applying the principles of the several sciences, to the daily routine of husbandry. The course commenced in September. During the winter months the time of the pupils was occupied in the study of mathematics, and the six books of Euclid were mastered by them; whilst in the summer the knowledge thus obtained was applied to the measurement of land, timber, buildings, and other practical purposes. The first principles of Chemistry were also unfolded. By means of a good but economical apparatus, various experiments either on a large or small scale were performed. For the larger ones the brew-house and still-house with their appendages were found to be highly useful. Much attention was directed to the analysis of the soils, and the different sorts met with distinguished according to the relative proportion of their component parts, were arranged on the shelves with great order and regularity. There was an extensive botanic garden, arranged according to the system of Linnæus; an herbarium, containing a large collection of dried plants; a series of the skeletons of different animals connected with husbandry; and models of agricultural implements, all open to the examination of students. The various implements used upon the farm were all made by smiths, wheelwrights, &c., residing around about the institution; and the pupils were allowed access to the workshops and encouraged to make themselves masters by minutely inspecting the implements, and the niceties of their construction."

Thaer's school demonstrated the necessity of such institutions, and hence a number of similar ones sprung up, under liberal government patronage, in different parts of Germany; as that of Tharant, near Dresden, (founded 1811) for Sylviculture, and those of Hohenheim in Wurtemberg, (1818) and Weyhenstephen in Bavaria, (1822) for agriculture.

PESTALOZZI'S SYSTEM OF COMBINING MANUAL LABOR AND STUDY.

While Thaer was thus developing his system of agricultural education in Germany, Pestalozzi (born at Zurich 1745 and died 1827) was laboring in Switzerland to build up a system of education for the benefit of the poor, that would combine manual with mental labor. And this sys-

tem, under the patronage of Fellenberg, with the labor of Wehrli, was inaugurated at Hofwyl, near Berne; where, in addition to a school for the poor, was also one for the sons of gentlemen of wealth, who wished to study agricultural science and practice; and at a later period an additional department for the education of teachers was established. After the death of Pestalozzi and Thaer the number of agricultural schools gradually increased in Europe, till about the year 1840. The system of Pestalozzi (improperly called the Wehrli system) was gradually introduced, with various improvements and modifications for the benefit of the poor, and that of Thaer for the more independent classes, and in some institutions both were combined.

RECENT PROGRESS OF AGRICULTURAL EDUCATIONAL INSTITUTIONS.

All these attempts at agricultural instruction were very imperfect, owing to the very undeveloped state of agricultural science. But the labors of De Saussure, Gay-Lussac, Thenard, Lavoisier, Sennebie, Priestley, Ingenhauss, Davy, and other scientific men, were preparing the way for an agricultural science which in the length and breadth of its domain, and the accuracy of its result, would afford ample material for thorough mental training and a prolonged college course.

In 1840, Liebig, under the title of "Chemistry in relation to Agriculture and Physiology," published a work in which was exhibited all his characteristic power of presenting in clear and forcible language, all that his predecessors had learned in regard to agricultural science, combined with what his own investigations and reflections had taught him. This work astounded the reading world; it was soon translated into the different languages of all cultivated people, and awakened the most active spirit of inquiry in the minds of all educated men. Hundreds of scientific and practical men, in Europe and America, betook themselves to experimentation in the field and laboratory, to test the correctness of Liebig's views.

While in many cases of detail, these investigations led to the modification of many of Liebig's opinions, in the

main they were found to be correct, and the necessity for agricultural schools in which to teach the newly developed science of agriculture, became more apparent every where, and accordingly we find that the number of such schools has been increasing with surprising rapidity within the last twenty years. So that at present we find about twenty High Agricultural Schools or Colleges in Germany alone, three in France, one in England, one in Ireland, one in Holland, and in addition to these, several hundred elementary agricultural schools for the peasantry, and a large number of Professorships of Agriculture in the different Universities of Europe. Nearly all the high schools and colleges have farms attached, and extensive means in the laboratory and field to experiment in agricultural science and practice.

The principal part of them are supported, in part, by state patronage, and their increasing number and importance is a marked indication of the necessity of their existence. Even in Russia, an agricultural school was founded near St. Petersburg about twenty-four years ago, at which the Emperor educated the serfs who were to help manage the immense estates of his realm. They devoted five years to labor and study so as to become familiar with the best methods of agricultural practice, and then were sent one by one to different parts of the Empire to infuse a knowledge of what they had learned into the minds of others; about sixty such were sent out annually; since this time other agricultural schools have been founded in that country.

Agricultural Education in America.

It was hardly possible that the subject of agricultural education should have occupied so prominent a place in the minds of European agriculturists, without attracting a corresponding degree of interest in American minds. Indeed, before any of the great modern scientific agricultural schools of Europe were founded, the necessity for the professional education of young farmers was proclaimed from American lips.

AGRICULTURAL EDUCATION IN NEW YORK.

As early as 1838, the Hon. Jesse Buell was pleading the

cause of Agricultural Education in New York. In an address prepared for delivery before the Agricultural and Horticultural society of New Haven, Connecticut, (a short time before his death) September 25, 1839, after dwelling upon the fact, that we have schools for the study of the sciences of medicine, law, engineering and war, and declaring that for agriculture, by which, under the blessing of Providence, we virtually live and move and have our being, and which truly embraces a wider range of useful science than either law, medicine, or navigation, we have no means of professional education at all, he proceeds to point out the evil consequences of this absence of agricultural schools, in which to teach the principles and practice of agriculture, and urges upon farmers the necessity of having them established, and closes his appeal with the prophetic declaration, that "many who now hear me will live to see professional schools established in our land; to see their utility extolled, and to be induced to consider them the best nurseries of republican virtues, and the surest guarantee for the perpetuation of our liberties. They should be established, *they will be established*, and the sooner they are established the better for our country." (See page 280, *The Farmer's Companion* of 1840.) From 1842 till 1846, the subject of agricultural education was discussed by prominent citizens of the New York Agricultural Society, and in the latter year an effort was made to induce the Legislature to take some action upon the subject.

The question was repeatedly brought before the Legislature in subsequent years, but elicited no action till 1853, when a bill was passed *incorporating* the "New York Agricultural College," but providing no means for *founding* it. In 1855 a subscription was opened, and soon after an act of Legislature passed, loaning the college \$40,000 for twenty years without interest, provided a like sum be raised by private subscriptions for the purchasing of a farm, erecting of College buildings, &c., &c. Soon afterwards a farm was secured of 700 acres, between the village of Ovid and the eastern shore of Seneca Lake. A large college building was laid out and a part of it finished so as to admit 150 students. The college was open for students on the first

day of December, 1860, but it did not survive the general depression produced by the war, and at present its doors are closed.

The People's College, which was also designed to be, in part, agricultural in character, was incorporated in 1853 by an act of Legislature, and subsequently located upon a tract of 200 acres of land in Schuyler county, New York. The buildings of this college have been partially completed, but it is not yet in successful operation.

MICHIGAN.

The State of Michigan has a clause in her constitution (adopted 1850) providing for an Agricultural College, in accordance with which, in 1855, the Legislature appropriated \$50,000, with which a tract of 700 acres of land was purchased, near Lansing, and buildings erected upon it for an Agricultural College. In 1857 an additional \$40,000 was appropriated to the College, and in the following May, students were admitted. To Michigan belongs the honor of thus having put the first State Agricultural College in the United States in operation, but for some cause this College has been obliged to suspend operation.

MASSACHUSETTS.

The Massachusetts Legislature, as early as 1850, appointed committees to investigate the subject of Agricultural education, and in 1856 incorporated a "school of agriculture," and the question is still under consideration by prominent citizens of the state, but as yet, the school has not been founded.

MARYLAND.

The Maryland Agricultural College was incorporated in the winter of 1856, and soon after located upon the homestead of the Hon. Charles B. Calvert, upon a farm of 400 acres, ten miles north of Washington City; the act provided for an annual appropriation of \$6,000, for the support of the college, provided the sum of \$50,000 was first received by subscription; this amount being received, the college was partially completed and opened for students in 1860, and has been in successful operation since that time. It differs from the *Agricultural College of Pennsylvania*, in its

course of instruction, being more nearly allied to that of ordinary literary colleges, and consequently having a less scientific course, and in its not requiring manual labor of each student upon the farm.

IOWA.

The Iowa State Agricultural College and Farm was incorporated in March, 1858, and some provisions were made for the erection of college buildings, but the disturbed state of the country has for some time suspended operations there.

MINNESOTA.

The Minnesota Agricultural College was incorporated in 1858, and located on a farm of 320 acres in Glen County, but the buildings for a college have not yet been erected.

ILLINOIS.

The agitation in favor of Agricultural Colleges in Illinois was commenced early by public-spirited men, and as early as 1852 the Legislature was memorialized upon the subject. Repeated efforts have been made by the friends of agriculture in the state, to induce the Legislature to found an Agricultural College, yet nothing has been done by the state. But private enterprise has succeeded in establishing the embryo of an agricultural college near Chicago, though it is languishing for that aid which every enlightened state should confer upon agricultural education.

OHIO.

The State of Ohio has had the subject of agricultural education before its Legislature at different times, but nothing tangible has, so far as we know, resulted from its action. A Farmers' College, with a few acres of land, has been established by private enterprise near Cincinnati, but its course of instruction does not differ essentially from that of an ordinary literary college.

AGRICULTURAL PROFESSORSHIP.

In several of the Colleges and Universities of the United States, Agricultural Chairs have been established.

In the preceding brief synopsis we have not mentioned the names of the many public-spirited and liberal-minded men, by whose disinterested efforts all these attempts to found agricultural institutions of learning have been made.

It was sufficient for the purposes of this paper to briefly note what they have done, and leave their names to history, which will yet tell their deeds to unborn grateful millions, who, in future generations, will enjoy the blessings of agricultural education in institutions originating in their unrewarded and unappreciated efforts. We now come to that which more nearly concerns us in the present history.

The Agricultural College of Pennsylvania.

This Institution, though about the first that was founded in the country, is still hardly old enough to constitute a subject for a history; but as many questions are often asked in regard to its origin, it is deemed proper to devote a few pages here to this subject.

AGRICULTURAL SOCIETIES IN PENNSYLVANIA.

The State of Pennsylvania was one of the first in the Union to adopt measures for the diffusion of agricultural intelligence. As early as 1785 the Philadelphia Agricultural Society was founded, and its *members* met regularly for a number of years. In 1823, the Pennsylvania Agricultural Society including the counties of Philadelphia, Chester, Montgomery, and Delaware, was founded. This Society held some fairs during its existence.

PENNSYLVANIA STATE AGRICULTURAL SOCIETY.

In 1851, the present Pennsylvania State Agricultural Society was organized, under the auspices of which the Farmers' High School of Pennsylvania (now the Agricultural College of Pennsylvania) originated. As already intimated, the *primary idea* of Educational Institutions, especially devoted to instruction in agriculture, and the industrial arts, was of much earlier origin.

ORIGIN OF AGRICULTURAL EDUCATION.

It was a *legitimate consequence* of the progress of modern

science and its important bearings upon the practical operations of life, together with the general diffusion of knowledge among all classes, by which the purely scientific and purely practical man were brought into contact with each other.

The necessity for Agricultural Schools was apparent to any one at all acquainted with the resources of science, or the demands of Agricultural practice.

The importance of Agricultural Education being recognised, the only question at issue, related to the manner in which a system of Agricultural Education should be inaugurated.

KIND OF AGRICULTURAL SCHOOLS WANTED.

Did the Agricultural interest demand a course of instruction as extensive as that of our ordinary Colleges, obliging the student to devote three to five years to the study of those sciences which relate to agricultural and the industrial arts, as in the highest Agricultural Institutions in Europe, or did it demand only an *elementary course*, such as is there given in their schools for Farm Bailiffs, who are not supposed to have the tastes and aspirations of those whom they technically term gentlemen?

Was it desirable that the farmer should have such a knowledge of agricultural science, as would enable him to investigate and develop agricultural principles, or was it simply desirable to teach him to practise those rules, which others deduced for him from principles he could not understand? Was it desirable that one large Agricultural Institution be founded in a State, capable of employing a sufficient number of professors to admit of a proper division of labor amongst them, and consequently enable them to afford a thorough and efficient course of instruction, in order to educate a *few students* to a *high standard*? or was it better to have several smaller *local Institutions* capable of giving only a popular smattering to a larger number of students? These questions were canvassed by various parties, and the several different plans they refer to, proposed by different individuals, but without any one being accompanied with sufficient evidence in

its favor, to leave no doubt of its being the best system. But the time had come for trying the experiment.

A number of prominent men in Pennsylvania had been thinking upon the necessity of Agricultural Education for several years. An Agricultural Institution of learning, adapted to the wants of the farmer, had been a favorite idea with the present worthy President of the Board of Trustees of the Agricultural College of Pennsylvania for twenty years before this Institution was founded; but the pressing duties of public life prevented him from devoting time to the advocacy of these views till, in 1853, the subject was brought before the Pennsylvania State Agricultural Society.

ORIGIN OF THE STATE AGRICULTURAL SOCIETY.

This Society originated in a call, dated May 15, 1850, for an Agricultural Convention to be held at Harrisburg, on the 21st of January, 1851. It was signed by James Gowen, Dr. Elwyn, Samuel C. Ford, Algernon S. Roberts and J. P. Wetherill.

This Convention was attended by delegates from 55 counties of the State; after having organized, a committee was appointed to memorialize the Legislature for a charter. The Hon. Fred. Watts was appointed Chairman, and Dr. A. Elwyn, Secretary for the year.

Upon the last three days of the following October, the first annual fair of the Society was held at Harrisburg: About 20,000 persons are supposed to have been present, and the first annual meeting of the Society was held at the same place, on the 20th of the following January, (1852.)

The President, and Secretary, and Vice Presidents of the preceding year, were re-elected.

The second annual exhibition was held on the 20th, 21st, and 22d of October, at Lancaster, and proved to be an entire and unprecedented success, and the report of premiums awarded by the Judges, was embodied in the first annual report of the Society, presented by the President to Governor Bigler, January 20th, 1854.

The second annual meeting convened January 18th,

1853, at Harrisburg. At this meeting, Messrs. Frederick Watts, James H. Ewing and H. N. McAllister, were appointed members of a Board of Agriculture, in pursuance of a provision of the United States Agricultural Society, establishing such a Board; also, the following gentlemen presented a report upon the subject of an *Agricultural School*, A. S. Roberts, T. C. Carothers, Jos. Koenigsmacher, A. O. Hiester, D. Mellinger.

AN AGRICULTURAL SCHOOL.

The members of this Committee state that they believe the present to be an auspicious time for founding an *Agricultural School*; that the advantages to be derived from it, are too obvious to require demonstration, and that to inaugurate the movement, they recommend the calling of a general convention of Delegates from all parts of the State, to meet at Harrisburg, to consider this subject; whereupon it was *resolved*

"That an Agricultural Convention be held at Harrisburg, on Tuesday, the 8th of March next, to adopt measures for the establishment of an Agricultural Institution, to be styled, 'The Farmers High School of Pennsylvania,' with a model farm attached thereto, and that the convention consists of as many delegates from each district, as there are Senators and Legislators from the same: said delegates to be chosen by the Agricultural Societies where such are located, and in other districts by the friends of Agricultural Education."

THE FARMERS HIGH SCHOOL OF PENNSYLVANIA.

This convention met and, in the language of the Hon. Frederick Watts, in a letter afterwards addressed to Governor Bigler, "with an unparalleled unanimity recommended the establishment of a school for the education of Farmers, and gave the subject in charge to a committee to have it enacted into a law, and carried into effect."

This letter, which Judge Watts, as President of the State Agricultural Society, addressed to Governor Bigler on the occasion of his presenting the first copy of the annual report of that Society, is devoted mainly to the consideration of the proposed Agricultural School.

The advantages of such a school to the farmer, are pointed out with the characteristic force and perspicuity of the author, and a plan for its organization, together with the probable expenses of founding and maintaining it, is given.

In accordance with the decision of that committee, the next Legislature was applied to for an Act of Incorporation, which was granted and approved, April 13th, 1854.

ACT OF INCORPORATION.

This act states that "the Institution shall be called the Farmers High School of Pennsylvania, and shall be under the control of a Board of Trustees, composed of the Presidents of the County Agricultural Societies, and the President and Vice President of the State Agricultural Society, thirteen of whom shall constitute a quorum. They are directed to meet at Harrisburg, on the 2d Thursday of June after the passage of this act, and to organize and select a site, and erect buildings for an Institution, and procure a good practical farmer for its principal, who, with such other persons, as shall from time to time be employed as teachers, shall compose the faculty."

The teachers are to be capable of imparting a knowledge of the English Language, Grammar, Geography, History, Mathematics, and such other branches of the natural and applied sciences, as would conduce to the proper education of a farmer. And the students should be required to perform a certain amount of manual labor daily.

It was also made lawful for the State Agricultural Society to donate, out of its funds, for the purpose of the act, the sum of \$10,000.

It is obvious that this act contemplated an Institution for a very elementary course of scientific and literary instruction, combined with instruction in practical agriculture; but its most remarkable feature was the provision for the control of the Institution.

It requires but little reflection to see that a responsibility so divided as that devolving upon the trustees designated in this act, would be felt by no one.

FIRST MEETING OF THE BOARD OF TRUSTEES.

But in conformity with the provisions of the act, a few of the persons designated therein as trustees, met at Harrisburg, on the 13th of June, 1854, to consider its provisions, when it was found that a quorum of members was not present.

On motion of the Hon. George W. Woodward, it was

Resolved, That Messrs. Frederick Watts, James Gowen, and John Strohm, be appointed a committee to report a plan of organization to the next meeting of the Board, to be held on the 13th of July following, at Harrisburg.

At this adjourned meeting, only Messrs. Watts of Cumberland, Mumma and Rutherford of Dauphin, McIlvaine of Chester, Boal of Centre, and Baxter of Philadelphia, were present.

REPORT ON PLAN OF ORGANIZING A SCHOOL.

In behalf of the committee to which was referred the subject of a plan of organization for the Farmers' High School of Pennsylvania, the Hon. Frederick Watts reported that the committee are of opinion, that no good can result from any effort to organize under the existing law, that it provides for too many trustees (50 or 60)—that these are liable to be created or removed by causes entirely independent of the interest of the school, and they recommend that the Board shall consist of not more than 13 in number, of whom 9 shall be elected, and 4 ex-officio members. The committee further state that the bill is defective in view of its making no appropriation in aid of the object to be attained by it, and they go on to say that "There are many public-spirited men who believe that the establishment of such a school where boys may be educated as farmers, is of more importance than any design which could occupy public attention. It is a fact universally known, that the literary institutions of this country, as at present constituted, educate young men to a state of total unfitness, not only for the pursuit of a farmer, but as a companion for his parents, brothers and sisters, with whom he is expected to spend his life. He is therefore driven from his father's estate, and into

“a profession for which he has perhaps little capacity, and where he is subjected to all the temptations of an idle life. Whereas, the Farm School proposes to impart an education which is appropriate to a farmer, which educates his body to the *art*, as well as his mind to the *science* of farming, and which will have the feature of making the Institution so nearly self-sustaining, as to bring education, in point of expense, within the reach of every man who desires to make his son an educated farmer.”

The probable expense of founding and sustaining such a school is then given, and the necessity of founding it still further dwelt upon.

Whereupon, it was

Resolved, That the report be referred to Frederick Watts, George W. Woodward, and A. L. Elwyn, whose duty it should be to address the people of the State upon the subject, and to apply to the next Legislature to amend the bill as indicated in the report, and that said committee make all necessary inquiries where the Farmers High School of Pennsylvania may be most advantageously located, and that they invite propositions from all parts of the State, for its locality.

A CALL FOR OFFERS OF A SITE FOR THE SCHOOL.

The committee published an address, July 21st, 1854, to the people of Pennsylvania, setting forth the claims of the school, and its advantages to farmers, and the prospect of its soon being located, and they called upon persons for offers of inducements to locate it in specified localities.

At the fourth annual meeting of the State Agricultural Society, convened at Harrisburg, January 16th, 1855, a resolution was passed expressive of the deep interest felt by the State Agricultural Society of Pennsylvania in the Farmers High School of Pennsylvania, and praying the Legislature, then in session, to make such change in the Act of Incorporation of the Farmers' High School, as would secure its establishment.

At this meeting, the following communication was received, which, because of the liberality of the donor, and

of its being the first of its kind received, deserves a place here.

AN OFFER OF A SITE BY JUDGE MILES.

Gentlemen:—Believing the Agricultural interests of our State may be greatly and eminently promoted by the early establishment of the Farmers' High School of Pennsylvania, where a thorough, practical and scientific education may be acquired by the youth of our State who desire to make the tillage of the soil the business of their lives, I beg to make known to you, and through you to the gentlemen who are, or may be appointed trustees of the Farmers' High School of Pennsylvania, that I will give to the Institution, two hundred acres of land, situated in Girard Township, Erie County, provided said School be located on said land.

Yours truly,

JAMES MILES.

Subsequent to this, the Legislature passed the following Act of Incorporation of the Farmers' High School of Pennsylvania.

An Act to Incorporate "The Farmers' High School of Pennsylvania."

SEC. 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same, That there be and is hereby erected and established, at the place which shall be designated by the authority, and as hereinafter provided, an Institution for the education of youth in the various branches of science, learning and practical agriculture, as they are connected with each other, by the name, style and title of "The Farmers' High School of Pennsylvania."

SEC. 2. That the said Institution shall be under the management and government of a Board of Trustees, of whom there shall be thirteen, and seven of whom shall be a quorum, competent to perform the duties hereinafter authorized and required.

SEC. 3. That the Governor, Secretary of the Commonwealth, the President of the Pennsylvania State Agricultural Society, and the Principal of the Institution, shall each be ex-officio a member of the Board of Trustees, and they with Dr. Alfred L. Elwyn, and Algernon S. Roberts of the City of Philadelphia, H. N.

McAllister, of the County of Centre, R. C. Walker, of the County of Allegheny, James Miles, of the County of Erie, John Strohm, of the County of Lancaster, A. O. Hiester, of the County of Dauphin, William Jessup, of the County of Susquehanna, and Frederick Watts, of the County of Cumberland, shall constitute the first Board of Trustees; which said Trustees, and their successors in office, are hereby erected and declared to be a body politic and corporate in law, with perpetual succession, by the name, style and title of the Farmers High School of Pennsylvania; by which name and title the said Trustees, and their successors, shall be able and capable in law to take by gift, grant, sale or conveyance, by bequest, devise or otherwise, any estate in any lands, tenements and hereditaments, goods, chattels or effects, and at pleasure to alien or otherwise dispose of the same to and for the uses and purposes of the said Institution: Provided, however, That the annual income of the said estate, so held, shall at no time exceed twenty-five thousand dollars; and the said Corporation shall by the same name, have power to sue and be sued, and generally to do and transact all and every business touching or concerning the premises, or which shall be necessarily incidental thereto, and to hold, enjoy and exercise all such powers, authorities and jurisdiction as are customary in the Colleges within this Commonwealth.

SEC. 4. That the Trustees shall cause to be made a seal, with such device as they may think proper, and by and with which all the deeds and diplomas, certificates and acts of the Institution shall be authenticated, and they may, at their pleasure, alter the same.

SEC. 5. That at the first meeting of the Board of Trustees, the nine named who are not ex-officio members, shall by themselves and by lot, be divided into three classes, of three each, numbered one, two and three. The appointment hereby made of class number one, shall terminate on the first Monday of October, one thousand eight hundred and fifty-six, number two on the first Monday of October, one thousand eight hundred and fifty-seven, and number three on the first Monday of October, one thousand eight hundred and fifty-eight; and upon the termination of the office of such Directors, to wit: on the first Monday of October in every year, an election shall be held at the Institution to supply their place, and such election shall be determined by the votes of the members of the Executive Committee of the Pennsylvania State Agricultural Society, and the votes of three representatives duly chosen by each County Agricultural Society in this Commonwealth, which shall have been organized at least three months preceding the time of election; and it shall be the duty of the said Board of Trustees to appoint two of their number as judges, to hold the said election, to receive and count the votes, and return the same to the

Board of Trustees, with their certificate of the number of votes cast, and for whom; whereupon the said Board shall determine who have received the highest number of votes cast, and who are thereby elected.

SEC. 6. That on the second Thursday of June, after the passage of this act, the Board of Trustees who are hereby appointed, shall meet in Harrisburg, and proceed to the organization of the institution, and selection of the most eligible site within the Commonwealth of Pennsylvania for its location, where they shall purchase or obtain by gift, grant or otherwise, a tract of land containing at least two hundred acres, and not exceeding two thousand acres, upon which they shall procure such improvements and alterations to be made, as will make it an Institution properly adapted to the instruction of youth, in the art of farming, according to the meaning and design of this act; they shall select and choose a Principal for the said Institution, who with such scientific attainment and capacity to teach as the Board shall deem necessary, shall be a good practical farmer; he with such other persons as shall from time to time be employed as teachers, shall compose the faculty, under whose control the immediate management of the Institution, and the instruction of all the youth committed to its care, shall be subject, however, to the revision and all orders of the Board of Trustees; there shall be a quarterly meeting of the Board of Trustees at the Institution, and as much oftener as shall be necessary, and as they shall determine; the Board shall have power to pass all such By-Laws, ordinances and rules as the good government of the Institution shall require, and therein to prescribe what shall be taught to, and what labor performed by the pupils, and generally to do and perform all such administrative acts as are usually performed by and with the appropriate duty of a Board of Trustees, and shall, by a Secretary of their appointment, keep a minute of the proceedings and action of the Board.

SEC. 7. That it shall be the duty of the Board of Trustees, as soon and as often as the exigencies of the Institution shall require, in addition to the Principal, to employ such other professors, teachers or tutors, as shall be qualified to impart to pupils under their charge, a knowledge of the English language, Grammar, Geography, History, Mathematics, Chemistry, and such other branches of the natural and exact sciences, as will conduce to the proper education of a Farmer; the pupils shall themselves, at such proper times and seasons as shall be prescribed by the Board of Trustees, perform all the labor necessary in the cultivation of the Farm, and shall thus be instructed and taught all things necessary to be known by a Farmer, it being the design and intention of this act to establish an Institution in which youth may be educated, so as to fit them for the occupation of a Farmer.

SEC. 8. That the Board of Trustees shall annually elect a Treasurer, who shall receive and disburse the funds of the Institution, and perform such other duties as shall be required of him, and from whom they shall take such security for the faithful performance of his duty, as necessity shall require; and it shall be the duty of the said Board of Trustees, annually, on or before the first of December, to make out a full and detailed account of the operations of the Institution for the preceding year, and an account of all its receipts and disbursements, and report the same to the Pennsylvania State Agricultural Society, who shall embody said report in the annual report, which by existing laws, the said Society is bound to make and transmit to the Legislature, on or before the first Monday of January, of each and every year.

SEC. 9. That it shall be lawful for the Pennsylvania State Agricultural Society to appropriate out of their funds to the object of this act, a sum not exceeding ten thousand dollars, whenever the same shall be required, and to make such further appropriations annually, out of their funds, as will aid in the prosecution of this object, and it shall be the duty and privilege of the said Society, at such times as they shall deem expedient by their committees, officers or otherwise, to visit the said Institution, and examine into the details of its management.

SEC. 10. That the Act to Incorporate the Farmers High School of Pennsylvania, approved the thirteenth day of April, Anno Domini, one thousand eight hundred and fifty-four, be and the same is hereby repealed.

HENRY K. STRONG,

Speaker of the House of Representatives.

WM. M. HIESTER,

Speaker of Senate.

APPROVED—The twenty-second day of February, Anno Domini, one thousand eight hundred and fifty-five. JAS. POLLOCK.

(The above is the present law, with the simple exception of the time of holding the annual meeting of Delegates, which by act of Legislature, approved May 20th, 1857, was changed to the first Wednesday in September. And a subsequent act providing that five members shall constitute a quorum for the transaction of business.)

MEETING OF THE EXECUTIVE COMMITTEE.

The following members of the Executive Committee, met at Harrisburg, April 17th, 1855: Jas. Gowen, H. N. McAllister, A. O. Hiester, John Strohm, James Miles, Abraham McIlvain, Isaac G. McKinley, Thomas P. Knox, George

H. Bucher, William Bigler, David Mumma, J. S. Halde-
man, A. L. Elwyn, A. S. Roberts, J. P. Rutherford, and
R. C. Walker. At this meeting, a communication was
received from Gen. James Irvin, proposing to donate 200
acres of land, in Centre County, for the purpose of an
Agricultural School. The Secretary was directed to lay
this proposition, together with that from Judge Miles, of
Erie, with any others, that might be received, before the
Trustees of the Farmers High School, at their meeting
in June next; and with a hope of exciting emulation;
and inducing citizens from other parts of the State to
make similar offers. This order to the Secretary was pub-
lished in the leading Newspapers of the State.

ORGANIZATION OF THE BOARD OF TRUSTEES.

On the 14th of June following, the Board of Trustees
met at the office of the Pennsylvania State Agricultural
Society, at Harrisburg, and organized according to the
provision of the Act of Incorporation. (Page 20.) There
were present, Messrs. James Pollock, Governor, and A. G.
Curtin, Secretary of the Commonwealth, A. O. Hiester,
Frederick Watts, H. N. McAllister, John Strohm, James
Miles, A. L. Elwyn, and Robert C. Walker.

SITES OFFERED.

The following proposals to donate and sell land for a
site, were made: James Miles to donate 200 acres, in Erie
County; Genl. James Irvin, to donate 200, in Centre
County; Elias Baker, to donate 200 in Blair County;
James Bailey, to sell 2000 acres in Perry County, and Geo.
A. Bayard, to sell 600 acres in Allegheny County. On
motion of H. N. McAllister, Governor Pollock, Judge
Watts and Dr. Elwyn, were appointed a committee to ex-
amine the several sites offered.

At the next meeting of the Board, July 17th, 1855, at
Harrisburg, this committee made an elaborate report, sta-
ting that they had visited several sites offered for the lo-
cation of the college.

REPORT OF COMMITTEE TO EXAMINE SITES.

General James Irvin had offered any one of three farms of two hundred acres of good limestone land, with the pre-emption right to two hundred additional acres, adjoining any one of them within five years.

The two hundred acres offered by James Miles, were situated about eighteen miles west of the city of Erie, between the railroad which bounds it on the south, and the lake shore. The land was a sandy loam, highly fertile, with about one hundred acres of cleared land, and the rest with heavy timber; he would also give the pre-emption right to any additional quantity of land, which may be desired, at \$60,00 per acre.

The estate of George A. Bayard was situated on the Youghiogheny River, about three miles from its mouth, and eighteen miles from Pittsburgh. It consisted of 600 acres of well-watered freestone land, worth \$35.00 per acre. Very extensive improvements had been made upon the estate, including several dwelling-houses, and two large barns. Mr. Bayard would sell on reasonable terms.

The two hundred acres offered by Elias Baker, were situated in Blair County, on the Pennsylvania Railroad, about two miles southwest of Altoona; all the land, except about forty acres, was cleared and fenced, about sixty acres (south of the Railroad) was of good freestone land, and the balance (north of the Railroad) good slate land. There were upwards of two hundred acres more in the tract that could be purchased at about \$25.00 per acre. All the land was finely watered.

The committee further stated, that they had just received an offer of 200 acres of land, worth \$60.00 per acre, from Wm. H. Easton of Franklin County; also, that in their examination of the land, they had been accompanied by several members of the Board, of whose opinion they had availed themselves, in viewing the several tracts offered.

The committee close their report by saying, that although any one of the several sites they had viewed would be eligible, yet in view of the importance of the subject, and the fact that the people of the state were not yet sufficiently

acquainted with their efforts, they did not then deem it advisable to make a selection of any one of the sites offered.

The committee was then continued, and directed to examine such other sites as might be offered, and to report at the next meeting of the Board. In order that all friends of agricultural education over the state might have an opportunity to offer inducements to locate the college where they wished it, the proceedings of the meeting were ordered to be published in all the prominent papers of the state.

The Hon. Simon Cameron then stated that he thought \$10,000 could be raised in Dauphin County to purchase a farm there for a site, and that to this end he would lead a subscription with \$1,000. Messrs. J. W. Patten and J. Morrow, in behalf of the citizens of Blair county, offered to purchase two hundred additional acres, adjoining the two hundred offered by Colonel Baker, thus offering four hundred acres, provided the school were located in Blair county.

The meeting of the executive committee of the State Agricultural Society also convened at this time in Harrisburgh. On motion of H. N. M'Allister, at this meeting, it was *Resolved*, That the sum of \$10,000 be appropriated by the State Agricultural Society to the Farmers' High School of Pennsylvania.

The *third meeting of the Board of Trustees* convened at Harrisburg, September 12, 1855.

The Committee appointed to view sites for the location of the college, reported that, since the last meeting of the board, they had viewed three farms, offered by Mr. Easton, of Franklin County; two of them, of about 200 acres each, were situated on the Pittsburg turnpike, near the town of Loudon, both good limestone land in a high state of improvement, and on the one nearest the town a never-failing spring of water. A third farm, between Loudon and Mercersburg, of 240 acres limestone land in a high state of improvement, was also offered.

The Committee also presented a letter just received from David Blair, in which he offered to donate 200 acres, near Shade Gap, on the road leading from Mount Union, on the Pennsylvania Railroad, to Chambersburg, containing about

130 acres of cultivated land, the whole well watered, and limestone quarries on it. In regard to the site in Centre County, H. N. McAllister presented a paper in which he, James Irvin and A. G. Curtin, pledged themselves in behalf of Centre and Huntingdon Counties to donate the sum of \$10,000 for the purposes implied in the act of incorporation of the Farmers High School of Pennsylvania, provided the said site be accepted.

Mr. McFarlane and Elias Baker offered to donate 400 acres of land near Altoona, and to guaranty the sum of \$10,000 from the citizens of Blair County, provided this site were accepted.

An offer was also made by the trustees of the estate of Mr. Moore in Union County, to sell 265 acres of land for a site.

FINAL VOTE ON THE LOCATION OF THE SCHOOL.

After due consideration of all these offers, the Hon. Fred. Watts, of Cumberland, offered the following resolution:—*Resolved, that the adoption of the proposition of Gen. James Irvin for the location of the Farmers High School of Pennsylvania will best promote the interests of the institution, and that the same is hereby adopted.*

The question being on the adoption, Mr. Jas. Gowen moved to strike out the name of General Irvin and insert that of Elias Baker; *not agreed to*. Dr. Elwyn moved to strike out the name of General Irvin and insert that of H. Easton—*not agreed to*. Fred. Watts then moved that the question be postponed, and that James Gowen, A. O. Hiester and John Strohm be appointed a committee of three to examine the propositions and determine which should be accepted—*not agreed to*. Robt. C. Walker then moved to strike from the resolution the name of General James Irvin and insert that of Geo. A. Bayard; *not agreed to*. The question then recurring upon the original resolution, was decided in the affirmative.

The details of the selection of a site as just given are made more full than would otherwise have been necessary, in order to satisfy persons who may have an interest in the subject, that the present site of the Agricultural Col-

lege of Pennsylvania was not selected without a full and free opportunity for the friends of any other site to offer inducements for its location and erection, and without the claims thus presented being fairly and *impartially considered*.

SOLICITATION OF AID FROM THE STATE.

At a meeting of the Board of Trustees held January 4th, 1856, H. N. McAllister, A. O. Hiester and Robt. C. Walker were appointed a committee to solicit an appropriation (of \$50,000) from the Legislature then in session, for the furtherance of the object of the act of Incorporation of the Farmers High School of Pennsylvania.

PLANS FOR COLLEGE BUILDINGS.

At this meeting several plans for college buildings were presented. One by H. N. McAllister, for the college building, and one by Fred. Watts for a barn, were adopted, and H. N. McAllister, Fred. Watts, and James Miles were appointed a building committee to contract for the construction of the college buildings. Means were taken to secure a principal and competent teachers, to open the school as soon as the buildings were ready for the admission of pupils. The board also agreed to take 200 additional acres of land from Gen. James Irvin, making a farm of 400 acres.

CONTRACT TO ERECT COLLEGE BUILDINGS.

On the 12th of May, 1856, the building committee articulated with Messrs. Turner & Natcher to construct the College Buildings for the sum of \$55,000, and the work upon the building was at once commenced.

FIRST ANNUAL MEETING OF DELEGATES.

On the 6th of the following October, the board met for the first time at the site of the College. The occasion was that of the first annual meeting of delegates for the election of trustees. The contract of Turner and Natcher was approved by the board. Measures were taken to secure a sum of nearly (\$5,000) left by the will of the late Elliot Cresson to the Farmers High School; and Messrs. F. Watts, H. N. McAllister and J. Strohm, were appointed a com-

mittee to lay the affairs of the institution before the next Legislature.

APPROPRIATION BY THE STATE LEGISLATURE.

Accordingly, at the next Session, a bill to appropriate \$50,000 to the Farmers High School of Pennsylvania, was placed in the hands of Colonel Gregg, at that time Senator from that district. The committee also found an earnest, influential advocate in the Hon. James T. Hale, of Centre County.

Colonel Gregg at once espoused the cause of the bill with all the earnestness of an advocate; and, in conjunction with Judge Hale and the committee, canvassed it thoroughly before the Legislature, and finally brought it to the test of a vote by which it became a law, approved May 20th, 1857.

The Act in question appropriated \$25,000 at once to the Farmers High School, in view of \$25,000 already obtained; and appropriated an additional \$25,000, provided a like sum be raised by subscription. It further provides that the annual meeting of delegates for the election of members to the Board of Trustees be held on the first Wednesday of September.

At the 7th meeting of the Board held at Harrisburg the 18th of March, 1858, H. N. McAllister, of the Committee appointed for this purpose, made a report upon the progress of the Buildings under the contract, and of the state of the farm.

The passage of the act of May, 1859, infused new confidence into the movement. It placed \$25,000 in the hands of the Trustees at once, in addition to the \$25,000 already collected by subscription, and there was little doubt felt that the other 25,000 could easily be raised, thus redeeming the additional \$25,000 from the Legislature, and making a total of \$100,000, at the disposal of the Trustees. With the main College Buildings contracted for \$55,000, there seemed to be an additional surplus quite sufficient for erecting out-buildings and putting the farm into proper order for opening the college. At a meeting of the Board, July 2d, 1857, E. C. Humes was authorized to draw upon the State Treasury for \$25,000 in accordance with the act of May 20.

A LARGE MEETING OF DELEGATES.

The annual meeting of delegates for the election of Trustees assembled September 2d, 1857. There were delegates present from Allegheny, Berks, Blair, Bucks, Cambria, Chester, Clinton, Cumberland, Centre, Delaware, Erie, Huntingdon, Juniata, Lancaster, Mifflin, Northumberland, Perry, Schuylkill, Westmoreland, and Union. This meeting was opened by the Hon. Jas. T. Hale, thanking the audience for their attendance, and expressing a hope that the Hon. President of the Board of Trustees would favor them with some remarks upon the subject of the meeting, whereupon Judge Watts arose and said, that observation and reflection teach that men are classified by the *amount* and *quality* of their education, and not by their *calling*.

That the merchants and manufacturers in the eastern states, the professional men of the middle states, and the planters of the Southern States, were the most influential men in their respective states, because the best educated. The importance of agriculture in Pennsylvania, and the necessity of the agriculturist exerting a marked influence, pointed out the necessity of agricultural schools, at which to secure that education out of which this influence only can grow. He dwelt upon the great benefits conferred upon the agricultural interests, by the many agricultural societies which have recently been founded; and urged the necessity of building up the Farmers High School, as a means of still further enlightening the farmer on the duties of his calling, by affording a suitable course of instruction for his sons, at prices commensurate with his means. After alluding to the fact that the expense of an ordinary College course was too great to be met by the generality of farmers, he said:

“But the cost is by no means the *greatest* objection; for the effect of this education upon the farmer’s son in almost every case is, that of utterly estranging him from, and unfitting him for, the safe and healthful and normal pursuit of his father. The youth who returns to the farm at home, after three or four years’ study of books at college desks, and in purely literary society, finds utter uncongeniality in the company of his own father and brothers; his mind has been turned into paths leading quite away from rural pursuits, and his hands

are untaught and unfitted to assist in, or direct the labors of the farm. The moral effect of this common but sad result is equally disastrous and pitiable both in father and son. It is a state of things which must be cured: if not, it will act like a corrosive ulcer. We must combine the cultivated intellect and social amenities of mental refinement, with the strong practical usefulness and sound virtues of the agriculturist, who giving the sweat of his brow receives from Providence such bounties as are now stored around us in this building,* and spread upon these tables for the daily support of all human life, and who dispenses them to all other classes.

If these be not thus wedded, this great agricultural state of Pennsylvania must remain, as now, with the balance of influence and power in the hands of comparatively few; for I may be allowed to repeat, with no other desire than to contribute to the future prosperity of our glorious Commonwealth, that the great body of our citizens, the *great agricultural body*, have *not* the power and the influence which they ought to have for the proper balance of power in our political and social relations. *Something* must be done to increase their power—how shall we do it? Education will impart influence, but it must be such education as will lead to the desired end; it is self-evident that it is *no* education unless it is a *fit one*. Science, art, and labor must be combined. Here is our want. At present *we* have no suitable college in existence. Whatever may have been done in Europe under the greater pressure of necessity *we* have no such institutions as yet, to which we can have access.

Now the institution we are striving to establish, at the earliest possible period, is intended to supply this great social, political, moral, and economical want. And while it improves the mind of the agriculturist, and trains his hands, it will do both at less expense than a purely literary training can be obtained for. Thus, while reducing costs very greatly, it will educate better and fit for every business relation of practical life.

We estimate that \$100 per annum will fully cover all expenses for board and tuition, as we are instituting upon the farm different branches of culture adapted for exercise, and to illustrate fully the entire theory and practice of cultivation, and at the same time such as will afford pleasant and profitable, moderate, regular, and varied labor to the students. Provision will be made for ample and extensive mathematical training and engineering practice. All the branches of Natural science will be fully illustrated and taught. Moral and Social science, and all the arts of practical life, excluding nothing but what is exclusively literary as the acquisition of the dead and foreign languages. We have started—there must now be for us no such word as fail. Our Legislature has done much to aid us;

* At the dinner table in the barn.

we have much to do ourselves. Let us ask ourselves, each one of us, how much do we owe to society, and especially to the great class that forms its basis. Let there be no adverse feelings founded on local preference. What motive could there be to induce those who examined and determined the locality of this school to do else than right? With the approval of my associates, I could gladly have taken it into my own dear valley of Cumberland, but in the exercise of a sound and clear judgment (I speak for all as an inconsiderable one only) the Board having looked over all proposed lands and considered all circumstances, believed the one chosen to be the best. It is possible that we were in fault, yet I have ever believed the selection made combined more advantages than any other offered, and I ask for myself and associates the credit at least of honest motives, and of all to consider how many of the most essential advantages of soil, surface, exposure, healthfulness, and centrality, are combined in the ground we have met upon.

For a great common good, and in a spirit of mutual confidence, let personal feelings not enter into our consideration; but let us all agree to the conclusion that what is done is best. I must only detain you with a brief detail of our financial strength. We have received from our State Society \$10,000, from citizens of Centre County \$10,000, from the State \$25,000. From the estate of the late Elliot Cresson \$5,000, making in all \$50,000. To complete the buildings and open the institution we must have \$50,000, and this is provided for, if one half of the amount be raised by individuals. We shall then have \$100,000 with which we can then start this institution into active and useful operation at a rate of charge to each student of not over \$100 per annum. All the influence and industry *we* can exercise will go into the account, and if our judgment and management be approved, we shall not be allowed in this great Commonwealth to fail of such an object. The community understanding our aims, will not *let* us fail. We must obtain the \$25,000 by individual contribution, and I say for myself only because I am urged to say it, that I will be one of ten to give \$1,000 each towards making up that amount."

The speaker took his seat amidst the approbation of his auditors. Gen. James Irvin offered to be one of ten to subscribe \$1,000.

Hon. James Miles pledged \$1,000 for Erie and Crawford Counties. Hon. James Burnside thought Clinton County would be good enough for \$1,000, and Cambria for \$500. Hon. George Boal pledged Centre County for \$1,000 in addition to the \$10,000 already subscribed. General

Snodgrass pledged Allegheny County for \$1,000. H. N. McAllister offered to be one of twenty to give \$500 each.

Judge Hale arose and said:

Centre County has raised \$10,000, and one of her distinguished citizens has given an equal value in land, and has just pledged another \$1,000, followed by other conditional pledges from other of her citizens for yet another \$1,500.

The President of this meeting, who has given so freely of his valuable time and abilities to all the details of the enterprise at the greatest sacrifice, has offered yet a sum of \$1,000: now cannot we raise the balance of the sum wanted on the spot? I will pledge myself to raise \$500 more, if we can thus accomplish this. Let us hear from all the counties represented. As to the location of the school, it must necessarily be located somewhere. It has been located here, and we are sensible of the advantages it brings to us, and have contributed very nearly one-fourth of the entire estimate of 100,000. Yet all other counties will have an equal right with us to send pupils, and we feel that we have a right to ask other counties to aid in the consummation of this great work of the State."

Dr. J. R. Eshelman then pledged Chester County for \$500; John Strohm pledged \$500 for Lancaster. Several other pledges were given for all that could be done in other counties.

FINANCIAL DIFFICULTIES.

Unfortunately for the funds of the school many of the above pledges were not redeemed, and the general depression of business which followed the financial panic of 1857, together with the failure of crops in some of the counties, almost put a stop to raising subscriptions. In the meantime, the work on the college buildings was progressing, and the constant drafts on the treasury warned the business committee that some effort must be made to obtain subscriptions.

At two successive meetings of the Board at this time, December, 1857, and March, 1858, there was not a quorum of members present, and the business committee were to a certain extent left to their own resources in order to supply the constant demands upon the Treasury.

CONTRACTOR UNABLE TO FULFIL HIS CONTRACT.

It now became more and more apparent that the contractors would be unable to comply with the conditions of their contract, as it was evident that they had taken it at a price that would do little more than meet half the expense involved in complying with the contract, and being without means beyond those afforded by the Trustees, and the latter having an empty Treasury to draw upon, the prospects of the school were anything but flattering.

At this time there is no doubt the work would have been suspended, and the Pennsylvania Agricultural College would soon, like a great many others in the United States, have been known only by the half finished works that marked the spot where it was intended to stand, had it not been for the indomitable perseverance and unremitting labor of the business committee, and more especially of H. N. McAllister, the local Trustee, in looking after its affairs.

In addition to the \$10,000 that the latter gentleman guarantied for Centre County, in case the College were located upon the farm of Gen. James Irvin, he received nearly \$6,000 by subscription from others in the county, to which he added \$500 from his own pocket. He also visited a number of other counties, called meetings, and raised collections himself, or secured the services of others in doing so.

During all this time the general control of the work on the college buildings devolved upon him, and to meet the demand of the contractor he was obliged to advance several thousand dollars from his own pocket, trusting to raise it by subscriptions. The time to perform all this labor for the school was taken from a professional life already overcrowded with professional duties. It was done gratuitously, and all the expenses involved in travelling to collect money, hold meetings, or do other labor for the school were paid from his own pocket. It has been remarked that if for no other purpose, it were sufficient to locate the college in Centre County to secure the aid of a laborer so efficient and self-sacrificing in its behalf as the present local trustee. The thirteenth meeting of the Board of the Trustees con-

vened at the Farm School on the 16th of June, 1858. There were present Messrs. McAllister, Eyre, Hiester, Miles, Elwyn, and Watts, President. The President, as Chairman of the Business Committee, reported that they had contracted with General Irvin for the additional 200 acres of land adjoining the 200 he had donated. The committee further reported upon the progress of the building, stating the impossibility of the contractors being able to finish it. Whereupon they were vested, by the board, with power to act as the emergency might demand in order to secure the erection of the building.

H. N. McAllister, having been appointed by the President to solicit donations, reported that Centre County had subscribed \$5,769 64, but that a part of this was required to make up the \$10,000 which he, with Messrs. Curtin and Hale, had paid over as the subscription of Centre County in order to secure the location of the College; he, however, expressed his willingness to allow this balance on the \$10,000 to remain unpaid, that the entire sum just collected, might be made available for securing an equal amount from the state, in accordance with the act of appropriation of 1857, *provided* that the amount yet due them from the Centre County subscription, be paid from other subscriptions, that might be obtained after all the money available from the State was obtained. This proviso was approved by the Board. The financial affairs of the institution now presented the most serious problem for the solution of the Board.

EMBARRASSMENT OF THE BOARD.

The funds were exhausted, the contractors were about to fail, and the work of the basement walls not yet completed, while the country was prostrated, under the influence of the financial crisis of the preceding year. It was resolved to present an address to the people of the State, setting forth the financial difficulties of the Board, and to appoint suitable persons to solicit donations from the people; and to meet the emergencies of the present, it was resolved to raise \$5,000 upon the individual note of some of the members of the Board. Under such circumstances many corporations

would have at once broken up in despair, but the trustees of the Farm School, determined not to yield to these difficulties, made arrangement for the admission of pupils on the assumption that the building *must be prepared* for them. The conditions of admission and course of instruction were settled upon, and it is not a little remarkable, that at that time, and under these difficulties, and relying wholly upon their judgment of what the college should be, but without any experience as to how it would meet the wants of the Agricultural Community, they laid down the general plan of operation for it, which has since been followed out, and is now proving successful. It was decided to carry up about one-third of the building, and complete it for the admission of about 100 students, leaving the other two-thirds with only the basement walls up.

PROSPECT OF FAILURE.

At this period, such seemed to be the hopelessness of completing the building that those who did not appreciate the importance of doing so, nor understand the devotion of the Trustees, and more especially of the building committee, to the cause they had espoused, did not think it ever could be completed; and their policy of commencing a building sufficiently large to organize an Agricultural College was severely condemned, while a small school with an elementary course of instruction was pointed out as what could and should have been founded. To add to the discouragement of the members of the Board, who were determined the work should not stop, one of the most prominent members who had labored hard for the cause from the beginning resigned, but his place was supplied at the next annual meeting of the delegates, September 1st, 1858.

At the fifteenth meeting of the Board, December 8th, 1858, it was resolved that the school be opened for students on the 16th of February, 1859, and measures were taken to apprise the people of the Commonwealth of the fact, as also of the terms and form of admission. As already remarked, it had become evident that Turner and Natcher would be unable to comply with the conditions of the contract. The work of preparing the building had therefore

passed into the hands of the Building Committee, and they were urging it on with all possible speed to have the building ready for pupils at the appointed time; and to meet the expense involved, in going on with the work, five of the Trustees subscribed \$500 from their own pockets, which enabled them to draw a corresponding amount from the State, and they further authorized the President of the Board, to secure by loan an amount sufficient to finish and furnish the part to be prepared for the pupils.

OPENING SCHOOL.

At the appointed time, February 16th, 1859, the school was opened under the control of the following Faculty and Professors.

Wm. G. Waring, who had been superintending the farm, garden, and nursery for some time previous was now appointed General Superintendent of the College, and Professor of Horticulture; S. Baird, Professor of Mathematics; R. C. Allison, Professor of English Literature; J. S. Whitman, A. M., Prof. of Natural Science. Prof. Baird resigned May 18th, 1859, and the Board at that time assembled, appointed Prof. David Wilson in his stead. Over 100 pupils had engaged places, and sixty-nine were present on the first day of opening; during the session 119 students were entered, though there were never more than about 100 present at any one time, owing to the dismissal and expulsion of some and the withdrawal of others. The school was opened under innumerable difficulties and disadvantages. The buildings were only partially finished, and in the absence of the intended dining-room and kitchen a board shantee, which could neither be kept warm in cold nor dry in wet and stormy weather, was used to cook and eat in. Proper apartments for museums, laboratories, and recitation rooms were wanting. The farm was yet rough, and the lumber and materials for mason and brick work for the completion of the building, were piled round in shapeless masses on all sides of the latter, rendering it almost impossible to get about it, and presenting a most forlorn aspect to the students, who first entered the college,

through the well tramped mud of the breaking up of the winter frosts.

The limited number of students that could be admitted did not allow of the employment of a sufficient number of professors, teachers, and assistants to admit of a proper division of labor among them, and hence an efficient organization of the institution was not possible. The unprecedented nature of the experiment made it necessary to intrust it to inexperienced hands; and although every precaution was taken to admit none but students of the very highest character, yet unfortunately, experience soon proved that this flock was not without its "black sheep." Add to all this the general sentiment of superficial observers, that the building never could be finished, and the unhappy state of feeling produced in the minds of many in consequence of pecuniary losses they sustained by the failure of the first contractor, and bear in mind the state of the finances of the Board of Trustees as already pointed out, and we have some of the difficulties encountered by the Farm School on first coming into existence.

FACULTY FOR 1860.

At the nineteenth meeting of the Board of Trustees, held at the College, December 7th, 1859, the following faculty were nominated, and instructions given to prepare the first annual catalogue.

EVAN PUGH, Ph. D. & F. C. S., President.

DAVID WILSON, A. M., Vice President.

WM. G. WARING, General Superintendent of the Horticultural Department.

J. S. WHITMAN, A. M., Professor of Botany.

R. C. ALLISON, A. M., Professor of English Literature.

In view of the financial affairs of the Board, and the unfinished state of the building, the Rev. Thomas P. Hunt was appointed to solicit donations for the College. Mr. Hunt entered upon his duties with characteristic earnestness, but it was soon found that the country had not yet sufficiently recovered from the financial crisis of 1857,

to make it possible to raise money in this way, and the project was soon abandoned.

The Session of 1859 closed about the middle of December, and the Trustees then thought that the success which had attended the effort under the difficulties, met in making it, would induce the Legislature to afford means to complete the buildings. Accordingly, a bill asking money for this purpose was placed in the hands of one of the members, to be brought before the House of Representatives. The bill, however, never reached its second reading, and the College, incumbered with debt, and its building unfinished, was left to struggle through another year, dependent in part for its existence upon the energy and enterprise and liberality of those who had already sacrificed so much to bring it thus far.

The Session of 1860 was inaugurated with a full school, while several who applied from other states, could not be admitted. The increased experience of the faculty in managing it, and the greater experience of the students in performing their duties, gave additional hope of the ultimate success of the College, if its buildings only could be completed; on the other hand it became equally evident that if they were not completed, the school must stop, and all the property accumulated be sacrificed to meet its debts.

FINAL APPEAL TO THE STATE LEGISLATURE.

Successive appeals to private individuals had failed to secure the funds required. Being a State Institution, and not a denominational school, it had not the advantage of being able to interest any *special sect* in its favor. But on the other hand being an Agricultural School, devoted to the Agricultural interests of an Agricultural State, and having originated in an effort of the State Agricultural Society, and having been aided in its origin by State appropriations, it became most appropriately an object for State patronage, therefore, at a meeting of the Board of Trustees, held at the College, December 5th, 1860, it was

Resolved, That the sum of \$50,000 was necessary to

finish the College Buildings, and that an application be made to the Legislature at its approaching session to make an appropriation of that sum for this purpose.

Measures were at once taken to secure the passage of an Act, making this appropriation. In the Senate, the interests of the school would be ably represented by Colonel Gregg, who had labored so efficiently for the passage of the first appropriation, and in the House, where the greatest difficulty was anticipated, the College was fortunate in having the aid of the local member, Wm. C. Duncan, whose intelligent appreciation of the necessities of agricultural practice, and the financial difficulties of the Institution, made him an able advocate in its favor.

A few days after the close of the Session of 1860, the bill to appropriate \$50,000, was read in place by Wm. C. Duncan, in the House of Representatives, and referred to the Committee of Ways and Means. The Trustees of the College appeared before that Committee, and stated the aims, objects, financial difficulties, and necessities of the School. After the usual delays and hinderances common to legislation, the committee rendered a unanimous report in favor of the bill, and it only remained to bring it up for a second reading, to test the feeling of the House upon its merits.

In the meantime, Mr. Duncan had espoused the cause of the bill with an earnestness, and efficiency of action, and honesty of purpose which satisfied all its friends, that they were very fortunate in being able to intrust it to his hands. His honesty and uprightness of character, and personal acquaintance with all the leading friends of the school, and his knowledge of its necessity were sufficient guarantees to his fellow members, that the money asked for was needed for the purpose stated, and not for aggrandizement of individual or local interests.

Several of the County Agricultural Societies sent in letters and resolutions to the Representatives, urging the passage of the bill, while prominent friends of agricultural reform, from all parts of the State, either by letters to members in the Legislature, or by visiting Harrisburg

and by talking with them themselves, advocated the passage of the bill, and the political press, without regard to party, with singular unanimity united with the agricultural press in urging the claims of the bill upon the Representatives of the people of our great Agricultural State. The bill was finally brought to its second reading, when it passed with an overwhelming majority. A vote to suspend the rules which forbid the reading of the same bill twice in the same day, was carried and

The bill was read the third time, and thus passed the House.

Col. Gregg had always assured the Trustees that if the bill passed the lower House, he would have no difficulty in securing its passage through the Senate,—therefore, a few days after it passed the House, it passed the Senate, and received the signature of the Governor, and became a law.

Thus a great Agricultural State was saved the disgrace of allowing an Agricultural College it had attempted to found, to break up in the act of being founded, and \$150,000 worth of property that was collected for this purpose, was saved from being sacrificed, and on the other hand, our old Commonwealth has succeeded in bringing the first Agricultural School in the United States into successful operation.

Amongst those not members of the House who contributed to this result, the name of Hon. James T. Hale deserves especial mention as having by his great influence as a public man, and a member of the Board of Trustees, done much for the passage of the bill; as also did all the members of the Board, and most particularly the business committee, who were prepared at all times to leave their own pressing duties as professional men at home, to attend to the advocacy of the bill while before the Legislature.

The bill passed the Senate on the 10th of April, 1861. Fort Sumter was bombarded about this time, and the country was in the midst of the excitement consequent thereon.

The Board met at the school, May 1st, 1861, and notwithstanding the disturbed state of the country, caused

by the rebellion, determined to proceed at once to the completion of the building.

COMPLETION OF THE COLLEGE BUILDINGS.

To this end, Messrs. Watts, McAllister and Pugh were appointed a committee to examine the plans for the building, and to make such modifications of them, as might seem advisable, and to take measures to have the walls up and the building roofed by the first of the following November.

The committee at once advertised for sealed proposals to do the whole, or any part of the work, of putting up the building.

On opening the proposals thus obtained, that of George W. Tate of Bellefonte, was considered the most reasonable, and the committee at once articulated with him to complete the entire building, excepting some items specified, for the sum of \$41,500—the building to be under roof by the first of November, 1861, and to be entirely completed by the first of December, 1862.

The work of erecting the building was at once commenced, and has been steadily progressing up to the present time, September, 1862.

THE THIRD SESSION.

The third session of the College was opened under peculiarly unfavorable circumstances. The country was in that ominous calm that preceded the storm of rebellion, which has since broken upon it. The work of finishing the College had been so long delayed, that the public began to doubt the probability of its being finished at all, and it was evident to all, if the buildings were not finished, the School must go down.

Many doubted its ability to survive the third session, and some parents even hesitated to pay money in advance for tuition, lest it should be lost by the school being broken up. There were, however, many earnest friends of the movement, who never doubted even, at this time, the ultimate success of the school, and the timely action of the Legislature tended to restore the confidence of those who

had before doubted. But the result of this inauspicious opening of the college was that for the first time it was not filled with students, although eighty-eight were recorded in the third annual catalogue, published at the close of the session.

This session will always be interesting to the students of the college as being that at the close of which the first class was graduated. This was also the first class that graduated at an Agricultural College in the United States, and they graduated upon a higher scientific educational standard than is required at any other Agricultural College in the world. They had completed their course in three years, owing to their having entered the third class the first year. In 1858, the class had fifty-five students in it, and in 1861 it was reduced to seventeen, and only eleven of these completed their course, passed their examination, and took the degree of Bachelor of Scientific Agriculture. The following are the names.

James Miles, Jr., Erie Co.; A. C. Church, Luzerne Co.; J. W. Eckman, Lebanon; Samuel Holliday, Erie Co.; E. P. McCormick, Clinton Co.; M. S. Lytle, Huntingdon; John N. Banks, Juniata; J. D. Isett, Huntingdon; L. C. Troutman, Philadelphia; C. A. Smith, Berks; C. E. Troutman, Philadelphia.

The present session was opened on the 19th of February, 1862, and is now more than half completed; the college is full, notwithstanding the disturbed state of the country, and all its affairs are working more satisfactorily than they have ever done before.

CHANGE OF NAME.

The name "Farmers' High School of Pennsylvania," originated partly in a feeling that farmers might be prejudiced against the word "*college*" as that of a place where boys only contracted idle habits, and partly with the idea of founding a small institution, with a limited course of instruction, similar to the *Agricultural Schools* of Europe, which are subordinate to the Agricultural Colleges there.

But the school, on being organized, adopted a course of instruction in mathematics and the natural sciences, more

extensive than that in any *Agricultural College* of Europe, and a correspondingly longer time devoted to study was required for graduating. Its organization had been upon a collegiate basis from the beginning, and the Trustees only awaited the time in which they would be able to complete its buildings, to change its name. Therefore, at the solicitation of the faculty, and on the recommendation of the President of the Board of Trustees, H. N. McAllister made application to the Centre County Court, at its spring session, 1862, for a change of name, to the "*Agricultural College of Pennsylvania*." The Court granted the request, and the name as changed was approved by the Board at its next meeting convened at Harrisburg, May 6th, 1862. At this meeting it was resolved that a committee of three* be appointed to prepare a history of the origin of the Agricultural College of Pennsylvania, as also to state its aims, object, progress, and present condition and prospects. In accordance with this resolution, the present pamphlet has been prepared.

The history of the College here closes in the events of the active present to which attention will next be drawn. The secret of its success, it will have been seen, is to be found in the indomitable perseverance of a small number of public-spirited men, who were determined *it should not fail*.

As shown by the foregoing historical sketch, the Agricultural College of Pennsylvania has been in operation for four years. Its organization and means of accomplishing the object for which it was founded, have been very imperfect, owing to unfinished buildings and want of funds. Yet it has received a degree of patronage unprecedented in the history of Agricultural Colleges. It has been filled with students every session, except that of 1861, and many have applied from other states, who could not be admitted. With this success amidst the difficulties of the past, there can be no doubt of its ultimate success in the future, now that its college buildings are completed and the Agricultural College bill has passed Congress.

* This Committee consisted of the Hons. Fred. Watts and A. O. Hiester, with myself. It is due to these gentlemen, to state that their professional duties prevented them from giving special attention to the work, and, therefore, for any inaccuracies or imperfections in it, I alone am responsible.

Object of the Institution.

After what has already been said it would seem superfluous to dwell here upon the object of this institution, yet a few words in detail, may throw light upon what has been said. The Agricultural College of Pennsylvania has for its object, *to associate a high degree of intelligence with the practice of Agriculture and the industrial arts, and to seek to make use of this intelligence in developing the agricultural and industrial resources of the country, and protecting its interests.* It proposes to do this by several means.

1st. As a *purely educational institution*, its course of instruction is to include the entire range of the Natural Sciences; but will embrace most especially those that have a practical bearing upon the every day duties of life, in order to make the student familiar with the things immediately around him, and with the powers of nature he employs, and with the material through the instrumentality of which, under the blessing of Providence, he lives and moves and has his being: and since agriculture more than any other of the industrial arts, is important to man, and since for the complete elucidation of its principles more scientific knowledge is required than for all other industrial arts combined, it follows that this should receive by far the highest degree of attention. The course of instruction is thorough, so that it not only affords the student the facts of science, but it disciplines his mind to habits of thought, and enables him fully to comprehend the abstract principles involved in the practical operations of life. In doing this it is not deemed possible to educate every agriculturist, artisan, mechanic, and business man in the state, but to send out a few students educated in the college course that they, by the influence of precept and example, may infuse new life and intelligence into the several communities they enter. A single individual who is thoroughly educated in the principles and the practice of an art, followed by a community, will often exert a more salutary influence upon the practice of this art, by the community, than would re-

sult from sending the *whole community* to a school of lower order than that which he attended. A single practical school of the highest order in Paris (the Ecole Polytechnique) during the last generation made France a nation celebrated alike for profound philosophers, great statesmen, able generals and military *men*, and civil engineers. If one high school is established, subordinate schools affording the elementary education of the latter, will follow in due time.

2d. *As a Practical Institution* the Agricultural College of Pennsylvania has adopted the fundamental principle, that whatever is necessary for man to have done, it is honorable for man to do, and that the grades of honor attaching to all labor, are dependent upon the *talent*, the *care* and *fidelity* exhibited in performing it. It is further considered essential *as a part of a student's education* that he be *taught the practical application*, in the field and laboratory, of the principles he studies in the class-room; and manual labor is also necessary for the preservation of health, and the maintenance of habits of industry. An incidental, but not unimportant result of the operation of these principles is a reduction of the cost of tuition by the value of the labor, so that the college can take students at the present very low rates of admission.

All students without regard to pecuniary circumstances, are therefore obliged to perform manual labor as an *essential part* of the college education and discipline and training. In these respects consists a most essential difference between the idea associated with manual labor at this college, and that of all other attempts made heretofore to combine manual labor with study. Instead of the idea of poverty and want being associated with those who labor, that of *laziness*, worthlessness, and vagabondry is associated with those who refuse to work efficiently, and the experience of the institution has already most assuredly shown that no young man, of whom there is any hope for future usefulness and efficiency in life at all, is insensible to the disgrace which thus attaches to lazy vagabonds who will work only as they are watched, and cheat their fellow students by refusing to do their share of the labor assigned

them; and nothing is more conclusively settled than that those students who are the most studious and industrious in class, work the most efficiently and are the most trustworthy in the performance of their daily three hours' work.

3d. *As an Experimental Institution*, the Agricultural College of Pennsylvania has an unbounded field for labor. The principles of Agricultural science, which shall ultimately constitute the subject of instruction in its classrooms, are as yet only very imperfectly developed, and so great is the labor, expense, and time involved in making scientific agricultural experiments, that as yet little has been done in this direction. In the embarrassed condition of the finances of the college, it has not been possible to employ more scientific aid than was absolutely necessary to maintain a proper degree of efficiency in the educational and practical departments, nor could the other expenses requisite for extended scientific investigation be met with the means heretofore at the disposal of the Board; a few experiments upon the manufacture, preservation, and use of manures for the growth of crops, have, however, been inaugurated, while corresponding initiatory steps have been taken to experiment in other departments. It is most earnestly to be hoped that the recent appropriation of public lands by Congress to the state for agricultural purposes will afford means for the development of this department of the institution. The development of no other department would yield richer and more lasting results, or would confer more substantial benefit upon agricultural practice than this. It must not, however, be supposed that these results will manifest themselves at once, or that they will pay as experiments are being made: as well might the farmer expect to reap his crop the day he sows his grain. They will, however, ultimately pay a thousand fold, as have the practical application of the sciences of electricity, heat and optics, in the present day, paid for the half century of apparently unpractical, purely scientific investigations that led to the results now obtained through them.

4th. *As a means of protecting the industrial interests* of the State, and most especially the agricultural interest, from the sale of bad or worthless or too high priced material (as

manures, seeds, plants, and implements used in agricultural practice.) The only efficient means of accomplishing this object is to diffuse a higher degree of intelligence, and a more extended scientific knowledge amongst farmers: for so long as they are unacquainted with the principles of agricultural science, there will be quacks and impostors, and ignorant empiricists, who will prevail on them to invest at least a little money in some new manure, seed, plants or other things, in the hope of realizing the large gain from it, that they are told will follow its use. Farmers have satisfactory means of testing agricultural implements, and they also can test seeds and plants with a good degree of satisfaction, but their methods of testing manures, chemical salts, guanoes, phosphates, poudrettes and other similar articles are very imperfect, and hence we find that the market is filled with worthless or very high priced manures, such as the farmer never would purchase, if he knew their composition and real value. A beginning has already been made towards making known the character of some of these manures, and although it is not expected that such work can be accomplished without opposition from parties interested in their sale, there is no doubt that before long all the bad manures will be driven from the market, and good ones, better and cheaper than the best and cheapest now sold, will take their place. In order to hasten this time farmers are requested and particularly urged to purchase no high priced artificial manures without having a legal guarantee with it, that it shall contain a specified amount of valuable matter, equal in value to what is paid for the manure.

It will require some years to fully develop and perfect all these departments, but the success which has thus far already attended the undertaking, and the progress that has already been made, afford the most satisfactory reason for hope that all that was anticipated by the founders of the institution, and much more, will ultimately be realized in it.

THE COLLEGE

AS IT WILL BE IN OPERATION NEXT YEAR, 1863.

Buildings.

The main college building is a stately and substantial edifice constructed of a silicious magnesian limestone of excellent quality for building purposes. It consists of a central part and two wings connected with the latter by curtains. The central part and the wings facing on the same line, 234 feet long in front, and the central part resting on 54 feet of the front line, and extending back 130 feet, the two wings each resting on 42 feet of the front line, and extending back 81 feet. While the two curtains each occupy 48 feet on a line parallel to the front line, but ten feet back from it, the curtains extend back 56 feet. The building has five stories above a commodious basement. Each story has a large hall running from one end to the other, parallel with the front line, and extending through the middle of the curtains. From this hall, and at right angles with it, three halls extend back, one on the middle line of the central part, and one in each end wing; on each side of these halls, doors opens into dormitories, recitation-rooms, museums, &c. The entire building embraces 165 dormitories, ten by eighteen square and nine to eleven feet high; a library room, twenty-four by forty-six; geological and mineralogical museum, twenty-four by forty-six; anatomical museum, twenty-six by thirty-six; museum of agricultural productions, twenty-four by twenty; chemical laboratory for beginners, in basement twenty-four by fifty-six, and two laboratories on the first story, each twenty by forty, for more advanced students; two lecture rooms, each twenty-six by thirty-four feet; four recitation rooms, each twenty by thirty-four feet; and several smaller rooms for apparatus for special scientific investigations, and for store rooms; also a large room eighty feet long and twenty-eight feet wide for

a chapel, and two rooms, each fifty-six feet long and twenty wide, for society halls; and the entire back central part, forty-eight feet wide and eighty feet long, on first story, for kitchen and dining-room, and a room on the first story twenty by thirty-six feet, for an elementary or preparatory department, with an adjoining recitation-room, fifteen by twenty feet. The basement is mainly to be devoted to coal and hot-air furnaces, of which there will be sixteen of the largest size, from which heated air is conveyed in separate flues to every room in the building. All the rooms are also ventilated by flues extending to the top of the building from each room. The basement also contains the laboratory above noted, in addition to store-rooms, bake-house, and kitchen for culinary department, and three other laboratories for the rougher kinds of scientific work. The above, in addition to two reception parlors, and commodious apartments for one professor with family, and for the family of the culinary department, constitute the extent of internal arrangement of the buildings. For commodiousness, completeness of detail, and stability of construction these buildings are not equalled by the buildings of any Agricultural College in the world.

The other buildings embrace,

1st. An excellent double-decked barn, fifty-nine by seventy-five feet, and constructed upon the most approved plan, with wagon shed, corn crib, water cisterns, &c.

2d. A large hog pen, with a granary over it, twenty-two by eighty-three feet, including also a complete slaughter-house.

3d. A blacksmith shop, twenty by twenty-eight feet, with all the appliances for doing smith work.

4th. A carpenter shop and tool house, sixteen by forty-four feet.

5th. Wash house. This building is sixteen by forty feet, situated near the barn, and is fitted up for washing the students' clothes.

6th. Two frame dwelling-houses, one twenty-eight by twenty-eight feet, now occupied by the carpenter and Superintendent of the washing department, and the other, thirty-two by forty-four, occupied by the professor of botany; in connexion with the latter house is a small green-house, with choice native and foreign plants.

Course of Studies.

The full course embraces four years, but students can enter any part of the course dependent upon their degree of advancement.

THE FIRST YEAR the Student studies Arithmetic, Elementary Algebra, Horticulture, Elementary Anatomy and Physiology, Physical Geography and Elementary Astronomy, English Grammar and Composition, Elocution, History, Practical Agriculture and the details of management on the College Farm. Students, who have mastered the common school branches, will be prepared to enter the classes of this year. In order to be fully prepared for it, they are advised to pay particular attention to Grammar, Geography, Reading, Writing, Spelling and Arithmetic.

SECOND YEAR—Advanced Algebra and Geometry, General Chemistry, Vegetable Anatomy and Physiology, Zoology and Veterinary, Geology, Paleontology, Practical Agriculture and Horticulture, Logic and Rhetoric. Students who are sufficiently far advanced in Algebra, Geometry and English Grammar, are admitted to this class, without respect to the other studies of the first year.

THIRD YEAR—Surveying, Navigation, Levelling, Drafting with the use of Instruments, Analytical Geometry, Trigonometry, Elementary Calculus, Natural Philosophy, Chemical Analysis, Veterinary Surgery, Entomology, Agricultural Botany, Practical Agriculture and Pomology, Political and Social Economy. Students who have mastered Davies' Legendre and Trigonometry, and who possess a corresponding degree of knowledge of the English branches generally, and who have gone through a good academical text book course of Natural Science, are admitted to this class.

FOURTH YEAR.—Analytical Geometry, Differential and Integral Calculus, Engineering, Drafting, Mechanical Drawing, Quantitative Chemical Analysis, Veterinary Pharmacy, Gardening, Agricultural accounts and Farm Management, Moral and Intellectual Philosophy.

The ability to enter this year's courses, is dependent so

much on the Students having gone through the studies of the preceding year, and the latter being peculiar to an Agricultural College, of which there are no others in the country, no students prepared to enter it are likely to apply.

Students who successfully complete this course of studies, and pass a satisfactory examination, and prepare a dissertation of not less than fifteen pages of foolscap paper, upon some scientific or literary subject, (if scientific, it must embrace an original investigation) approved by the faculty, and whose general standing in the school shall have been good, shall upon the recommendation of the faculty, have the degree of Bachelor of Scientific and Practical Agriculture, *B. S. A.* conferred upon them by the Board of Trustees of the College.

Course for Graduates.

FIFTH YEAR.—Students who after having taken the degree of *B. S. A.* shall devote three years to Practical Agriculture, or to any intellectual pursuit or profession, shall take the degree of Master of Scientific or Practical Agriculture, *M. S. A.*, or, if they remain another year in the Institution, and devote their time to special investigation, they can take this degree at the termination of the year.

Private Laboratories with means for investigation, will be fitted up for graduates of this or any other College, in which to pursue prolonged, special, scientific investigation. Graduates of Literary Colleges, who may only have pursued an ordinary text book course in science, and who wish to devote some time more especially to science, in connexion with agricultural practice, can take any part of the above course, or devote themselves to scientific investigation with the graduates of the fifth year, at the same time they are familiarizing themselves with the details of agricultural practice on the farm.

SCIENTIFIC EXCURSIONS.

The valley and neighboring mountains afford rare opportunities for botanical study; and for Physical Geography, Paleontology and Geology. This district is unsurpassed

by any other in the country. The great Synclinal and Anticlinal Palæozoic waves east of the Alleghenies, are here shown in every variety of position and angle of inclination, while good outcrops of nearly all the subdivisions of the palæozoic rocks from the lowest to the coal measure, are to be seen. Frequent excursions are made with classes to observe them.

Auxiliaries to Study.

Mathematics.—A transit instrument of first quality for field work, ordinary surveying apparatus, with compass, for the use of Students, and Mathematical figures and forms for illustrating Geometrical and Crystallographic principles.

Natural Philosophy.—Large Electrical Machine, Air-Pumps, Magnetic Machine, Galvanic Batteries, an extensive collection of apparatus for illustrating the principles of Optics, Statics, Dynamics, Mechanics, Pneumatics, &c., and opportunities are offered for Students learning to use this apparatus themselves.

Chemistry.—A large collection of apparatus adapted to the lecture room and class recitations, for illustrating principles by experiments; also, a large Chemical Laboratory for beginners, and two other smaller Laboratories, each affording room for twenty-four more advanced Students, and several private Laboratories for special agricultural scientific investigation, all fitted up with the aids and appliances of the best German Laboratories, where the Students may pursue a thorough course of qualitative and quantitative analysis. Also, collections of Marls, artificial Manures, Limestones, Ores, Minerals, &c., from different localities of America and Europe.

Botany.—Herbariums with extensive collections of American and European plants; microscopes; a botanical garden and green house with native and foreign plants; nursery for practice in budding, grafting, &c.; and anatomical preparations for illustrating vegetable structures. The neighboring flora, embracing, as it does, the wide range of the valley and mountain soil, affords excellent opportunities for botanical excursions.

Geology and Paleontology.—A collection of nearly six

thousand specimens of rocks, limestones, fossils, ores, &c., collected from all parts of the State,—together with a large collection from Europe. The neighborhood is one of the finest in the world for the study of the numerous subdivisions of the Palæozoic rocks, from the “primal” to the “seral” of Rogers, in all of which the Student will have an opportunity of obtaining good specimens on geological excursions.

Mineralogy and Crystallography.—A good collection, embracing specimens of all the ordinary minerals known, and many rare specimens; also, collections of models, of crystals, blow-pipe apparatus for mineral testing, &c.

Practical Agriculture and Horticulture.—A farm of four hundred acres limestone land of excellent natural quality, coming into a good state of cultivation, with all the tools, implements, and machines for efficient farm practice, (see P. 60) Experiments with all the chemical elements of manures are carried out every session, for the purpose of illustrating the effect of each element alone and in combination, as also experiments as to the time of planting and sowing seeds, and applying manures. Each Student will have an opportunity of learning all the varied operations of ordinary farm, garden and nursery work, in connexion with the management of farm stock. A small nursery is especially devoted to practice for Students. There are also extensive vineyard, orchards, &c.

Library.—An extensive collection of choice literary and scientific works, with maps, diagrams, and charts, are accessible to the Student.

Reading Room.—A comfortable room with all the leading scientific and literary papers and journals, is set apart for a reading room in the building.

Students' Societies.—There has been in the Institution from the time of its first organization, two Students' Societies, the “Cresson Literary” and the “Washington Agricultural” Societies. Each Society has a large and commodious room in which to hold its meetings, as also adjoining rooms for libraries, all fitted up in appropriate style by the members of the respective Societies.

The Full Course.

The character of the full Course of Studies is sufficiently indicated by what has just been given in relation to them. They are arranged to combine the study of Scientific principles with their practical application.

The Student studies each of the several sciences purely as a scientific study, and then his attention is devoted to their practical application to agriculture and the industrial arts. For example, he studies the science of Chemistry in the class-room and laboratory, until he is able to analyze all the substances that will be presented to him, as ores, rocks and minerals for the miner; slags, fuel, metals and alloys for the furnace operator; residual products for the manufacturing chemist; poisonous substances and abnormal secretions for the physician; adulterated articles for the consumer; and soils, marls, limestones, phosphates, guanoes, ashes, and all other articles used or consumed in agriculture for the farmer.

His attention is then devoted to the agricultural bearings of the science. The manures found in the market are put in his hands. He learns by analyzing them, to distinguish between the good and bad, and his labors are so superintended that his results will be valuable to the farmers of the country when published. A large number of the analyses of manures found in the market, have already been published. A course of experiments upon the farm, with different kinds of manures for different plants, is also being carried out, from year to year, upon a large scale; while smaller plots, with suitable manures, are allotted to students, that they may repeat for themselves the experiments of the larger plot on a small scale, and thus familiarize themselves with the experimental processes by which, with the use of a few simple manures, they may ascertain what soils need to bring them to the highest degree of perfection—a desideratum once sought by soil analyses, but never attained by them.

Partial Scientific and Practical Course.

Experience has often demonstrated that many students who are incapable of making progress in mathematical

studies, are well qualified for making successful students of the natural sciences. In order not to prevent those who may not be able to go through the higher mathematics of the full course, from enjoying the benefits of the natural sciences of the whole course, the "Partial Scientific and Practical Course" has been instituted. Students in this course will pursue the same studies as those of the full course, excepting analytical geometry, the differential and integral calculus, and the higher mechanics.

Practical Course.

This is designed for such students as may wish to remain for a limited period of time, in order to see the various arts and operations of the Farm, Garden and Nursery; and at the same time attend some of the classes in the College, and thus get a general idea of the subjects taught, without studying them with sufficient thoroughness to graduate.

It is intended more particularly for such as may have become too old, or who are too delicate to take the entire course, but who wish to acquire *special* practical and *general* scientific knowledge, preparatory to going upon a farm.

It will be seen from the above, that the Agricultural College of Pennsylvania is designed to occupy a place in our educational system, not heretofore occupied, rather than to come into competition with any Educational Institutions already in existence. Its course of studies and practical operations are such that the student may, with profit, go through the last two years of the latter, either before or after he has completed the ordinary course of a literary College.

Special Peculiarities and Advantages of the Course.

The student has an opportunity of seeing all the practical operations of the Farm, Garden and Nursery performed

in the most approved manner, with the use of the best manures, seeds, tools, and implements; and, what is of more importance than this, he studies in the class-room and laboratory, the scientific principles involved in all he does, and by becoming a scientific man, and analytical chemist, he is enabled to protect himself and others against the frauds and cheats that are continually being practised upon the uneducated, by dealers who are themselves either ignorant of science, or who use it to impose upon the community. He learns how to study the geology, mineralogy, and chemistry of the soil he cultivates, the botany of the plant he grows, and the laws of health and disease of the animals he uses.

In a word, he is made thoroughly acquainted with the laws and phenomena of the material world with which he is in immediate contact, and about which farmers are most deplorably ignorant, but a knowledge of which is essential to their material success, or intellectual pleasure, in the pursuit of the duties of rural life.

To persons in cities who may wish their sons to become acquainted with the details of practical agriculture and science, and at the same time to cultivate the associations of rural life, either with a view to ultimately settling upon farms, or to increasing their capacity for business in town, by the associations thus cultivated with the habits of the country, the Agricultural College of Pennsylvania affords excellent advantages.

Persons wishing a good scientific and practical knowledge of chemistry, with a view to druggistry, pharmacy, or the manufacture of chemical salts or manures, or pursuing the operations of mining, engineering, or any of the industrial arts, will find rare opportunities at a comparatively insignificant cost here.

All will find the advantages of a most healthy and pleasant location, in a neighborhood of good morals, free from the allurements of city or village life, and of an opportunity for forming acquaintances with young men of respectability from all parts of the State.

Conditions, and Form of Admission.

Qualifications.—Applicants must have attained the age of sixteen years, and present satisfactory certificates of good moral character and industrious habits; and must also have a good knowledge of the elementary branches of the common school course.

On entering, they must consider themselves *pledged to conform to all the rules and regulations of the Institution*, among which is the daily performance of three hours' manual labor.

Expenses.—The sum of one hundred dollars must be paid in advance, on entering. This, with the labor above specified, will meet all expenses for boarding, room rent, tuition and washing for the term of ten months.

Applications.—These may be made, either by addressing the President of the Institution directly, or by applying through the Agricultural Society of the county, in which the applicant resides.

Certificates of Character.—These should be signed by the student's last teacher, the officers of the Agricultural Society of the county in which he resides, or by some other friend of moral and agricultural improvement.

It is the earnest desire of the officers of the College to fill it with industrious, trustworthy and gentlemanly Students, whose sense of honor and appreciation of duty will be a guarantee that they will conform to its rules and regulations.

It is their design to admit no other than such.

Expenses.

In addition to the one hundred dollars above specified, Students will incur only the following expenses:

Books and Stationery.—These will be supplied at city retail prices; and will cost about eight dollars per term for the third and fourth classes, and ten dollars per term for the first and second classes.

Apparatus.—The Students of the second class will require about fifteen dollars' worth of apparatus, with which to study chemical analysis in the laboratory. This, when

not damaged, will be taken back, if desired, at the close of the term, at a reduction of twenty-five per cent. on the first cost. With ordinary care, when the apparatus is returned, the cost of it per term will not exceed eight dollars.

Incidental Expenses.—A slight incidental expense will be incurred for light, broom, towels, pitcher, wash basin, &c., in all not exceeding five dollars per annum.

Economy.—As it is desirable to impress upon Students the necessity of forming habits of economy, parents are advised not to be too liberal in giving them money; and they are recommended to deposit such sums as they may intend for their sons or wards in the hands of the Faculty, who will see that it is not spent improperly.

Clothes.—Each Student should come prepared with an additional suit of clothes, of common material, for wearing while working on the farm. As warm weather will commence soon after the beginning of the term, he should also make arrangements, previous to entering, for a supply of summer clothing.

Although not indispensable, some delicate Students have found an advantage in bringing with them a thick comfortable for their beds during a few cold days just after the opening of College, or near its close.

Location.

The Institution is located in Centre County, near the geographical centre of the State, at a distance of about twenty-one miles northeast of the Pennsylvania Railroad at Spruce Creek, and about the same distance northwest of it at Lewistown, and nine miles southwest of Bellefonte. Its site embraces a limestone soil of good natural quality, in a fine healthy district, affording a view of the beautiful Penn's Valley, in which it is situated, and which, at this point, is about ten miles wide. On the northwest, at a distance of about six miles, is seen the long range of the Bald Eagle Mountains, and beyond these the smoky summits of the Alleghenies. In the opposite direction, at an equal distance, are seen the rolling ridges of the Seven Mountains; while to the southwest, as far as the eye can

reach, extends the Penn's Valley, and in the opposite direction, at the distance of about three miles, Nittany Mountain rises abruptly, and divides it into two valleys, Penn's and Nittany. With these mountains in the horizon, and an intermediate landscape of five to ten miles, interspersed with farms and timbered lands, few points in the State afford finer views than that from the cupola of the College buildings.

The school may be reached by students or visitors,

1st. By the Pennsylvania Rail Road to Spruce Creek, Lewistown or Tyrone. From Spruce Creek a stage leaves on Tuesdays, Thursdays and Saturdays, passing the school for Bellefonte, and returning on the intermediate days.

Daily stages from Lewistown and Tyrone run to Bellefonte, which latter place is accessible to the school by the Spruce Creek stage, or by livery accommodation.

2d. By the Sunbury and Erie Railroad to Lock Haven, and thence by stage to Bellefonte and the school, as just mentioned.

The Lock Haven and Tyrone Rail Road which passes within six miles of the College, will, it is hoped, be finished before the opening of the next session. By it, Students can come to Bellefonte from either the Pennsylvania Central, or the Sunbury and Erie Railroad.

Farming Material.

It is proposed here to notice some implements, machines, &c., not before noticed in our catalogue, that have been used upon the farm and are now to be seen on the premises.

REAPING MACHINES.

McCormick's Combined Self-raking Reaper and Mower. This machine did not arrive at the college in time to be tested as a mower, but two of the Trustees, Judge Watts and H. N. McAllister, Esqs., speak of it in the *highest* terms as a mower. As a reaper, we gave it a fair trial through several days in succession cutting heavy wheat, the principal part of which was lodged, and a great deal of it was very much tangled. It was drawn by four mules, in charge

of one of our most responsible students, (J. P. Alexander, of Kishacoquillas) and did its work in the most satisfactory manner. The raker not only performs its work of removing the grain from the platform, but, by its well-adjusted motions, in front of the knife, and near the ground, it draws the tangled grain upon the knife, and removes it the instant it is cut off; thus letting the machine down beneath the lodged grain, should it by any means have got above some of it, as often happens with reapers when cutting grain in the direction in which it is lodged. The machine was witnessed in operation by a large number of farmers, many of whom owned other reapers, and all without exception admitted that it was the most complete reaper they had ever seen. It is manufactured by McCormick & Brothers, Chicago, Illinois. Cost of the reaper and self-raker attached \$175,00.

Pennock's Iron Harvester.—This is also a combined reaper and mower. We used it for several days in our grass. The ground was very rough, and contained an undue amount of stumps, roots, and stones, but the machine did its work quite satisfactorily; it was drawn by two mules. As a reaper, it was also used to cut about twenty-five acres of wheat, which it did very well. It required three mules to draw it, and two students to attend to it. This machine is remarkable for the simplicity of its construction, and its consequent security against getting out of order, as also for its light draft.

It is manufactured by Pennock & Brother, at Kennet Square, Chester County, Pa., and the cost of the machine is \$135,00.

Through the liberality of the respective manufacturers of the above machines, the college received them both as donations, for which its officers would here extend their most cordial thanks. Each machine has its peculiar merits, and speaks well for the energy and enterprise of the manufacturers. For large farms and extensive crops of grain, there can be no doubt that M'Cormick's reaper is unequalled by any other in the world. For smaller farms, and when the difference of cost would be an item of importance, the iron

harvester would assert its claims. As a matter of some interest, it may be stated here that for every hundred feet which the machine advances across the field the M'Cormick's reaper makes 264.7 strokes of 3.75 inches with its knives, making 82.7 feet of lateral motion to 100 of the longitudinal or forward motion of the cutting edge.

The Iron Harvester in the same distance makes 132.8 strokes of 6.6 inches each, making a total of 73.3 feet lateral for 100 of horizontal motion. The lateral motion of the former is 12.8 per cent. greater than the other for the same velocity of the machines.

Fans for Cleaning Grain.—One patented by Cyrus C. Crain, of Addison, Steuben County, N. Y., proves a very superior article; superior even to the climax machine which has proved an excellent one wherever used. It is adapted to cleaning clover seed, and to removing rye from wheat, and for all the purposes of a grain fan, it is worthy of the patronage of farmers. These fans are for sale at Milesburg, Centre County, Pennsylvania. Price \$28.00.

Horse Rake.—This is a common iron-toothed horse-rake differing from others principally in having springs to keep the teeth down when in operation. It works well, and is manufactured by Fred. Bletz, of Columbia, Lancaster County, Pennsylvania.

An Ericsson Hot-Air Engine.—This is an engine with a piston thirteen inches in diameter, and eleven inches stroke. It is used to throw water through about 1,000 feet of pipe to an elevation of ninety feet. It has been in use for two years, and has worked very well, throwing water when in operation at the rate of from ten to sixteen barrels per hour, at an insignificant cost of fuel. It is very easily managed, any careful student being able to take entire care of it.

Other Implements and Machines.—There is a large assortment of all kinds of farming implements, &c., on hand, such as are required for the extensive operations of a farm of 400 acres, with gardens, nurseries, hot-house.

Conclusion.—It is the design of the officers of the institution, as soon as practicable, to give attention to the raising of improved stock, and to experiments upon the value of different food under different circumstances for fattening purposes, as, also, to have suitable arrangements for the preservation and use of liquid manures. As yet these things have been neglected to attend to the more strictly educational department of the institution. It is hoped, however, that they will soon all receive their due amount of attention.



CATALOGUE

OF THE

Officers and Students

OF THE

AGRICULTURAL COLLEGE

OF

PENNSYLVANIA,

FOR THE YEAR 1862.



PHILADELPHIA:

W. S. YOUNG, BOOK AND JOB PRINTER, 52 NORTH SIXTH STREET.

1863.

Board of Trustees.

EX-OFFICIO MEMBERS.

HIS EXCELLENCY, ANDREW G. CURTIN, *Governor of Pennsylvania.*

HON. ELI SLIFER, *Secretary of the Commonwealth.*

HON. THOS. P. KNOX, *President of the State Agricultural Society.*

DR. EVAN PUGH, *President of the Faculty.*

ELECTED MEMBERS.

Term of Office Expires.

HON. FREDERICK WATTS, CUMBERLAND COUNTY,	September, 1863.
" JAMES MILES, ERIE COUNTY,	" 1863.
" CHARLES E. HIESTER, DELAWARE COUNTY,	" 1863.
" H. N. McALLISTER, CENTRE COUNTY,	" 1864.
" ARCHIBALD McALLISTER, BLAIR COUNTY,	" 1864.
" CRAIG BIDDLE, PHILADELPHIA,	" 1864.
" A. O. HIESTER, DAUPHIN COUNTY,	" 1865.
" JAMES T. HALE, CENTRE COUNTY,	" 1865.
" MOSES CHESS, ALLEGHENY COUNTY,	" 1865.

OFFICERS FOR THE CURRENT YEAR.

HON. FREDERICK WATTS, *President.*

" E. C. HUMES, *Treasurer.*

" M. THOMPSON, *Secretary.*

BUSINESS COMMITTEE.

H. N. McALLISTER.

|

JAMES MILES.

FRED. WATTS.

Faculty and Professors.

EVAN PUGH, PH. D.; F. C. S.; PRESIDENT.

Professor of Chemistry, Scientific Agriculture, Mineralogy and Geology.

DAVID WILSON, A. M., VICE-PRESIDENT.

Professor of the English Language and Literature, Moral and Intellectual Philosophy, and Superintendent of the Agricultural Department.

J. S. WHITMAN, A. M.,

Professor of Botany, Physiology, Zoology, Horticulture and Gardening.

T. R. BAKER, B. S.,

Professor of Mathematics, Astronomy, Natural Philosophy and Analytical Mechanics.

ROBERT JENNINGS, V. S.

Professor of the Science and Art of Veterinary.

JOHN F. MILES,

T. P. WALKER.

Assistants in Analytical Chemistry.

Chaplains.

REV. ROBERT HAMMILL, REV. GEORGE G. FIELD, REV. S. L. BOWMAN,
REV. SAM'L M. MOORE, REV. JOS. E. BARNARD.

Superintendents.

MRS. ELIZABETH HUNTER AND DAUGHTERS,
Superintendents of the Culinary Department and Reception Parlor.

JOHN L. PATTERSON,
Superintendent of the Farm.

PROF. W. G. WARING,
Superintendent of the Nursery.

HENRY PRITCHARD,
Superintendent of the Garden.

JONAS C. TROXEL,
Carpenter and Superintendent of Wash House Department.

Catalogue of Students.

GRADUATING CLASS OF 1862.

NAMES.	POST OFFICE.	COUNTY.
Alexander, J. P.....	Kishacoquillas.....	Mifflin.
Breneman, H. R.*.....	Lancaster.....	Lancaster.
Barnes, Win. R. †.....	Lewistown.....	Mifflin.
Fisher, Alfred J.....	Philadelphia.....	Philadelphia.
Furst, R. H.....	Cedar Springs.....	Clinton.
Gleim, George, Jr.,.....	Lebanon.....	Lebanon.
Harvey, H. T.....	Lock Haven.....	Clinton.
McCoy, Frank †.....	Milesburg.....	Centre.
Miles, John F.....	Girard.....	Erie.
Negley, H. H. †.....	Wilkins.....	Allegheny.
Orr, J. W.....	Orrstown.....	Franklin.
Peffer, B. B.....	Carlisle.....	Cumberland.
Potter, J. I. ‡.....	Agricultural College.....	Centre.
Shinn, W. A. †.....	Pittsburg.....	Allegheny.
Thompson, J. I. †.....	Agricultural College.....	Centre.
Watts, F., Jr.....	Carlisle.....	Cumberland.
Walker, T. P. *.....	Connelsville.....	Fayette.

SECOND CLASS.

Auten, Andrew.....	Princeville.....	Illinois (State.)
Blee, Daniel B.....	Washingtonville.....	Montour.
Brown, A. W.....	Lewisburg.....	Union.
Campbell, Perry.....	Milesburg.....	Centre.
Clark, John.....	Glasgow.....	Delaware (State.)
Carville, W. B.....	New Albany.....	Indiana (State.)
Gordon, T. †.....	Zion.....	Centre.
Gordon, J. D.....	Zion.....	Centre.
Graff, Wm. H.....	Claymont.....	Delaware (State.)
Heilner, P. B.....	Pottsville.....	Schuylkill.
Hubbell, J.....	Philadelphia.....	Philadelphia.
Kisterbock, J., Jr.....	Philadelphia.....	Philadelphia.
Mills, W. W.....	Haminton.....	Wayne.
Myers, S. S.....	Claymont.....	Delaware (State.)
Rich, John C.....	Burlington.....	New Jersey (State.)
Salisbury, Geo. E.....	New York.....	New York (State.)
Stoner, A. M.....	Pittsburg.....	Allegheny.
Whittemore, J. De Wint,.....	New York.....	New York (State.)

* Left about ten weeks before the close of the session to join the army, and are now engaged as officers in the service, in view of which the honors of graduation will be conferred upon them without examination.

† Left in good standing before the close of the session.

‡ Left to join the State Militia on its being called out to repel the anticipated rebel invasion, but returned to College after the Militia had been disbanded.

§ Was prevented from completing his course by a prolonged and severe illness.

THIRD CLASS.

NAME.	POST OFFICE.	COUNTY.
Atkinson, Wm. M.	Atkinson's Mills	Mifflin.
Blickensderfer, U.	West Springfield	Erie.
Bryson, Robert	Mechanicsburg	Cumberland.
Clayton, J. M.	Pottsville	Schuylkill.
Crain, A. W.	Hoguestown	Cumberland.
Demuth, Geo. E.	Lancaster	Lancaster.
Dowling, W. J.	Philadelphia	Philadelphia.
Dwight, T. Edwards	Northampton	Massachusetts (State.)
Eldred, J. E.	Lock Haven	Clinton.
Frazer, T. D.	Newburg	Cumberland.
Garber, J. B.	Columbia	Lancaster
Greene, Oscar P.	Bellefonte	Centre.
Harlan, J. P.	West Chester	Chester.
Hannah, P. A.	Salem	New Jersey (State.)
Humes, W. P.	Bellefonte	Centre.
Humes, H. B.	Mifflintown	Juniata.
Irvin, T. V.	Jersey Shore	Lycoming.
Isett, Frank B.	Spruce Creek	Huntingdon.
Jones, A. A. C. A.	St. Louis	Missouri (State.)
Lee, John H.	Croton Falls	New York (State.)
Letterman, Geo. W.	Lamar	Clinton.
Low, John N.	New York	New York (State.)
Marks, W. W.	Lewistown	Mifflin.
McArthur, Geo. A.	York	York.
Orr, J. P.	Orrstown	Franklin.
Pierce, Wallace	Mount Hickory	Mercer.
Pierce, Walter	Mount Hickory	Mercer.
Powders, D. L.	Orrstown	Franklin.
Potter, Geo. L.	Agricultural College	Centre.
Russell, T. F.	Pottsville	Schuylkill.
Schell, Jos. E. Jr.	Philadelphia	Philadelphia.
Shortlidge, J. W.	New Garden	Chester.
Smith, Harsell	Ravenswood	New York (State.)
Stull, J.	Salem	New Jersey (State.)
Terry, G. S.	Jersey City	New Jersey (State.)
Waring, Wm. G. Jr.	Boalsburg	Centre.
Wilson, W. S.	Airy View	Juniata.

FOURTH CLASS.

Ambos, Emil	Columbus	Ohio (State.)
Best, E. C.	Salona	Clinton.
Blickensderfer, J. C.	West Springfield	Erie.
Bubb, Wm. H.	Lebanon	Lebanon.
Briscoe, C. V.	Philadelphia	Philadelphia.
Caldwell, J. M.	Kollidaysburg	Blair.
Carter, John	Agricultural College	Centre.
Cremer, Geo. G.	Huntingdon	Huntingdon.
Crook, Frank	Baltimore	Maryland (State.)
Curtin, A. G.	Milesburg	Centre.
Dysart, E. B.	Tipton	Blair.
Enos, H. B.	Philadelphia	Philadelphia.
Gillespie, C. H.	Philadelphia	Philadelphia.
Herr, F. H. H.	Philadelphia	Philadelphia.
Johnson, Justus	Germantown	Philadelphia.
Kaine, W. W.	Uniontown	Fayette.
Lackey, Wm. P.	West Chester	Chester.
Leiper, C. I.	Chester	Delaware.

NAME.	POST OFFICE.	COUNTY.
Magee, Wm. S.	Philadelphia.....	Philadelphia.
Mallery, J. D.	Philadelphia.....	Philadelphia.
Mecke, Wm. J.	Philadelphia.....	Philadelphia.
Milligan, F.	Philadelphia.....	Philadelphia.
McClees, L. B.	Philadelphia.....	Philadelphia.
McClintock, J.	Philadelphia.....	Philadelphia.
Nelson, J. C.	Pittsburg.....	Allegheny.
Parry, W. W.	Pottsville.....	Schuylkill.
Pugh, C. B.	Hickory Hill.....	Chester.
Ross, A. B.	McVey town.....	Mifflin.
Shuster, J. T.	Germantown.....	Philadelphia.
Stokes, F. E.	Philadelphia.....	Philadelphia.
Thompson, Wm.	Agricultural College.....	Centre.
Troxel, L. P.	Agricultural College.....	Centre.
Turner, W. W.	Port Carbon.....	Schuylkill.
Yarrow, E. P.	Philadelphia.....	Philadelphia.
Yeager, H. C.	Pittsburg.....	Allegheny.
Yuengling, F.	Pottsville.....	Schuylkill.

RESIDENT GRADUATES.

C. A. Smith, B. S. A., Reading, Pa., a graduate of the Penna. Agricultural College.
 * Augustus King, A. B., New York, a graduate of Columbia College, N. Y.

SUMMARY.

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* It is our painful duty to record the death of this promising young man, who by his goodness of heart and gentlemanly demeanor had endeared himself to all his instructors and associates during his residence with us. He left College about the 1st of August, apparently in good health, to be with his venerable father, (Pres. King, of Columbia College,) for a few days, as he said, to solace him in view of the danger to which his brother (Gen. King,) was exposed in the Army of the Potomac. He arrived at home somewhat indisposed, though not thought to be seriously so; but after some days his case developed into Diphtheria, and finally ended with Typhoid fever, of which he breathed his last. His friends may assuredly feel that the loss of a friend upon earth has been his gain of many in heaven.

Grades of the Graduates.

NAMES.	Mathematics.	Chemistry.	Natural History.	English Literature.	Geology and Mineralogy.	Zoology and Veterinary.	Practical Agriculture.	Class Average. ***	Dissertation.*	Final Grade.**
J. P. Alexander.....	9.6	8.2	9.4	9.7	9.6	9.5	10.0	9.43	9.0	9.22
A. J. Fisher	9.9	8.8	9.6	10.0	10.0	9.7	9.8	9.68	9.0	9.34
R. H. Furst.....	9.6	8.4	9.4	9.6	9.9	9.8	9.8	9.50	9.0	9.25
Geo. Gleim, Jr.,.....	9.8	8.4	9.4	9.9	9.8	9.8	9.4	9.50	9.0	9.25
H. T. Harvey.....	9.4	9.8	9.7	9.9	9.8	9.6	8.1	9.47	9.0	9.23
J. F. Miles	10.0	10.0	10.0	8.0	9.9	9.8	10.0	9.67	9.2	9.43
J. W. Orr	7.2	7.4	7.2	8.5	8.2	8.3	9.2	7.99	7.0	7.49
B. B. Pepper.....	6.6	6.7	8.3	7.0	8.5	8.2	10.0	7.90	7.0	7.45
Fred. Watts.....	6.5	7.1	8.3	8.5	8.5	8.5	8.0	7.91	7.2	7.55
Wm. R. Barnes.....	7.3	*	7.9	7.8	7.0	9.0	9.5	*	*	*
Frank McCoy.....	8.1	*	8.3	8.0	7.5	10.0	9.9	*	*	*
J. I. Potter.....	7.8	*	8.0	8.0	6.8	9.0	6.4	*	*	*
J. I. Thompson	9.5	*	8.3	9.6	8.0	9.0	6.5	*	*	*

*Studies not completed, owing to absence from College. See foot note, p. 68.

**The "Class Average" is the average of the numbers in the seven columns preceding it. The "Final Average" is that of the numbers in the two columns immediately preceding it.

***Grades in the "Final Average" between 9 and 10 correspond to the *first* degree; between 8 and 9 to the *second* degree; and between 7 and 8 to the *third* degree.

Grades of the Second Class.

NAMES.	Mathematics.	Chemistry.	Natural History.	English Literature.	Practical Agriculture.	Conduct.	Average.
Auten, Andrew.....	8.5	7.5	8.7	8.0	7.5	9.0	8.20
Blee, Daniel B.....	8.3	7.6	8.2	8.0	8.0	9.0	8.20
Brown, A. W.....	8.6	8.6	8.7	8.3	9.0	9.0	8.70
Campbell, Perry.....	8.5	9.0	8.8	8.8	9.0	9.0	8.85
Carville, W. B.....	9.0	8.9	—	8.8	7.0	9.0	8.54
Clark, John.....	8.1	6.9	—	—	9.0	9.0	8.25
Gordon, Theodore	8.5	8.6	8.6	8.6	8.0	9.0	8.55
Gordon, James D.....	8.3	8.0	8.5	8.6	9.0	9.0	8.57
Graff, William H.....	7.1	7.3	7.6	—	7.3	8.0	7.46
Heilner, S. P.	8.5	8.4	8.7	8.6	8.6	8.6	8.57
Hubbell, Johnson	6.8	7.3	7.3	—	7.0	7.5	7.18
Kisterbock, J., Jr.....	7.2	7.4	8.0	8.0	9.0	8.8	8.60
Mills, W. W.....	8.4	7.9	8.4	—	9.0	9.0	8.54
Myers, S. S.....	9.0	8.2	8.6	8.5	8.5	9.0	8.53
Rich, John C.....	8.1	7.6	8.6	—	7.5	9.0	8.16
Salisbury, Geo. E.....	—	9.0	9.0	8.6	9.0	9.0	9.00
Stoner, A. M.....	4.3	5.0	7.0	8.0	7.0	4.0	5.90
Whittemore, J. De Wint	—	7.7	8.5	—	7.0	9.0	8.50
Class average,.....	8.5	7.74	7.4	8.4	8.1	8.5	8.20

Grades of the Third Class.

NAMES.	Mathematics.	Chemistry.	Botany.	Natural Philosophy.	English.	Practical Agriculture.	Conduct.	Average.
Atkinson, Wm. M.....	9.0	8.9	9.0	9.0	9.0	9.0	9.0	8.98
Blickensderfer, U.....	9.0	8.6	8.8	8.9	7.5	9.0	9.0	8.64
Bryson, Robt.....	7.2	7.5	7.6	7.0	7.3	8.0	8.0	7.46
Clayton, J. M.....	5.1	7.5	7.2	7.2	7.1	8.0	8.0	7.15
Crain, A. W.....	6.1	7.3	7.0	7.1	6.7	8.0	6.0	7.20
Demuth, G. E.....	8.3	8.5	8.2	8.6	7.7	8.5	8.5	8.33
Dowling, Wm. J.....	5.0	5.5	6.0	5.8	6.0	8.0	8.0	6.33
Dwight, T. E.....	—	7.4	8.1	—	6.5	9.0	8.5	7.90
Eldred, J. E.....	8.3	8.6	8.2	7.9	7.3	8.0	8.9	8.17
Frazer, T. D.....	8.1	8.0	7.9	7.6	7.8	9.0	9.0	8.20
Garber, J. B.....	6.5	7.8	7.8	7.5	7.0	6.5	7.0	7.16
Greene, Oscar P.....	8.0	7.8	7.9	7.4	7.9	9.0	9.0	8.14
Harlan, J. P.....	8.0	7.6	7.8	7.3	7.9	9.0	8.2	8.25
Hannah, P. A.....	9.0	8.8	8.6	8.9	7.6	9.0	9.0	8.70
Humes, Wm. P.....	8.0	7.2	7.3	7.6	7.0	9.0	9.0	7.87
Humes, H.....	9.0	8.9	8.9	8.5	—	9.0	9.0	8.90
Irwin, T. V.....	9.0	8.9	9.0	8.9	8.3	9.0	9.0	8.87

Grades of the Third Class.—Continued.

NAMES.	Mathematics.	Chemistry.	Botany.	Natural Philosophy.	English.	Practical Agriculture.	Conduct.	Average.
Isett, F. B.....	8.5	8.3	8.2	8.4	7.5	9.0	9.0	8.41
Jones, A. A. C. A.....	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.00
Lee, John H.....	8.7	8.9	8.7	8.6	—	9.0	9.0	8.75
Letterman, Geo. W.....	8.7	9.0	9.0	9.0	8.3	8.0	7.5	8.50
Lowe, J. N.....	—	7.5	—	—	—	6.0	8.0	7.26
Marks, W. W.....	6.2	6.5	7.0	7.0	6.8	8.5	8.0	7.14
McArthur, George A.....	9.0	9.0	8.9	9.0	7.6	8.5	9.0	8.71
Orr, J. P.....	9.0	8.9	9.0	9.0	8.0	9.0	7.5	8.63
Pierce, Wallace.....	9.0	9.0	*	9.0	*	8.0	8.0	8.60
Pierce, Walter.....	9.0	9.0	*	9.0	*	7.0	9.0	8.60
Powders, D. L.....	8.8	8.8	8.6	8.7	7.0	8.0	8.0	8.27
Potter, George L.....	5.0	6.2	6.4	6.8	7.2	7.0	9.0	6.80
Russell, T. F.....	7.5	8.4	8.2	8.0	8.0	9.0	9.0	8.30
Schell, Joseph E.....	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.00
Shortlidge, J. W.....	7.2	6.9	7.0	7.0	7.0	8.0	8.0	7.30
Smith, Harsell.....	8.3	8.8	8.7	8.6	7.0	9.0	9.0	8.48
Stull, J.....	8.9	8.7	8.1	8.9	7.5	8.5	9.0	8.51
Terry, G. S.....	8.9	8.4	8.5	8.6	7.6	9.0	8.6	8.51
Waring, William G.....	8.7	9.0	8.8	9.0	7.7	9.0	9.0	8.74
Wilson, W. S.....	7.5	8.9	8.3	8.2	8.0	8.5	8.3	8.24
Class average,.....	8.00	7.98	8.14	8.17	7.54	8.44	8.49	8.16


* Studied Mathematics also in the Second Class.

Grades of the Fourth Class.

NAMES.	Mathematics.	Physiology.	Horticulture.	Natural Philosophy.	Physical Geog. & Grammar.	Practical Agriculture.	Conduct.	Average.
Ambos, Emil.....	5.3	5.0	5.3	—	6.0	9.0	7.0	6.26
Best, E. C.....	7.6	7.6	—	—	7.2	8.5	8.5	7.88
Blickensderfer, J. C.	8.4	8.0	8.1	—	7.5	9.0	9.0	8.33
Bubb, Wm. H.....	8.1	7.9	8.0	8.2	7.8	9.0	8.3	8.21
Briscoe, C. V.....	5.2	4.5	4.8	—	4.0	8.0	7.0	5.58
Caldwell, J. M.....	8.5	8.4	8.5	8.4	8.0	8.5	8.5	8.40
Carter, John.....	8.0	7.5	—	—	—	—	9.0	8.16
Cremer, Geo. G.....	7.7	8.3	8.4	8.0	7.0	9.0	9.0	8.20
Crook, Frank.....	8.4	7.8	—	8.3	8.5	9.0	9.0	8.50
Curtin, A. G.....	7.9	6.2	6.1	6.5	6.8	9.0	7.0	7.07
Dysart, E. B.....	8.6	8.3	8.4	8.4	8.2	7.0	8.5	8.20
Enos, H. B.....	6.2	6.0	6.8	—	6.8	9.0	9.0	7.30
Gillespie, C. H.....	5.7	5.0	5.1	5.0	6.6	7.0	6.5	5.84
Herr, F. H. H.....	4.9	3.5	3.4	3.0	3.0	6.0	5.0	4.11
Johnson, Justus.....	7.2	5.8	—	5.0	5.4	8.0	9.0	6.73
Kain, W. W.....	7.8	7.5	7.7	8.0	6.7	6.5	8.8	7.57
Lackey, Wm. P.....	7.3	7.1	7.2	7.0	6.8	7.0	7.5	7.22

Grades of the Fourth Class.—Continued.

NAMES.	Mathematics.	Physiology.	Horticulture.	Natural Philosophy.	Physical Geog. & Grammar.	Practical Agriculture.	Conduct.	
Leiper, C. I.....	8.4	8.2	7.8	8.3	8.0	8.5	8.0	8.17
Magee, Wm. S.....	8.1	8.8	8.1	8.2	8.8	9.0	9.0	8.57
Mallery, J. D.....	8.0	8.0	—	8.1	8.0	6.0	8.0	7.68
Mecke, Wm. J.....	6.8	5.8	5.5	5.5	5.4	8.0	7.5	6.35
Millegan, F.....	7.1	6.5	7.0	6.5	6.2	9.0	7.5	7.11
McClees, L. B.....	7.6	9.0	8.2	8.1	7.5	8.9	7.5	8.11
McClintock, J.....	5.7	5.0	5.5	4.9	4.0	8.5	6.0	5.65
Nelson, J. C.....	8.0	6.5	8.2	8.1	7.2	9.0	9.0	8.14
Parry, W. W.....	6.1	5.5	6.0	5.8	6.0	7.0	7.0	6.20
Pugh, C. B.....	8.7	8.5	8.5	8.4	7.5	9.0	9.0	8.51
Ross, A. B.....	8.3	7.5	7.8	8.0	6.7	6.0	8.9	7.60
Shuster, J. S.....	8.1	8.3	8.4	8.3	7.8	8.5	9.0	8.34
Stokes, F. E.....	8.0	7.9	8.0	7.8	7.6	8.0	8.0	7.90
Thompson, Wm.....	8.0	7.5	6.9	6.8	6.4	6.0	9.0	7.23
Troxel, L. P.....	8.6	8.0	7.7	7.9	8.2	9.0	9.0	8.05
Turner, W. W.....	5.3	5.1	4.7	5.2	6.0	8.0	8.3	6.08
Yarrow, E.....	8.1	—	7.8	7.1	7.7	7.0	8.6	7.71
Yeager, H. C.....	8.0	6.3	7.0	7.2	7.2	8.5	8.6	7.54
Yuengling, F.....	6.2	6.5	6.3	6.6	5.5	8.5	8.5	6.87
	7.39	6.95	7.00	7.08	6.80	8.05	8.14	7.37

 The grades range from one to ten—the latter number being the highest.

Subjects of Graduating Dissertations.

I. On the Manufacture of Superphosphates of Lime,

BY

JOHN F. MILES AND FREDERICK WATTS, JUN.

This subject is considered more particularly in regard to manufacturing superphosphates upon a small scale, with a view to obtain a method by which farmers may convert bones, phosphatic guanos, and other sources of insoluble phosphates into soluble phosphates. It embraces the consideration of making raw-bone phosphate, and burned-bone phosphate, from the ordinary bones of the butcher shop; as also that of making superphosphates from sombrero, guano.

II. On Some Ground Bones, and Raw Bone Superphosphates in the Market,

BY

ROBERT H. FURST AND J. W. ORR.

This dissertation gives the analysis of Baugh & Sons' raw-bone superphosphate; also their ground raw bones; together with Copes' raw-bone superphosphate, and some other phosphatic manures. The physical character of the manures is discussed, involving the consideration of how far the manufacturers have solved the difficult practical question of reducing raw bones to the requisite degree of fineness for the efficient action of sulphuric acid. The chemical examination affords the data for calculating the proper commercial value of the manure, according to the established methods of scientific agriculturists.

III. On Ordinary Superphosphates, and Other Artificial Manures in the Market,

BY

H. T. HARVEY AND GEO. GLEIM, JUN.

In this dissertation the following artificial manures have been considered: Rhodes' Superphosphate of Lime, Rogers & Gest's Nitrogenized Superphosphate, Mapes' Nitrogenized Superphosphate, Allen & Needles' Superphosphate, Mycoett & Perkins' Superphosphate, Patton's Phosphatic Guano, and some other manures found in the Philadelphia market. The chemical and physical character of each is discussed; and the analysis, and the calculated proper commercial values are given.

NOTE.—It is proper to state that there can be no question about the genuineness of all the specimens received and analyzed, as the specimens were taken from bags or barrel-fulls of each, purchased through a responsible farmer directly from the manufacturers or their accredited agents.

IV. On the Limestones of Kishacoquillas Valley,

BY

J. P. ALEXANDER AND A. J. FISHER.

A large number of specimens from the different parts of this interesting valley were analyzed. They were principally from the auroral and matinal rocks, and taken from parts freshly broken, and from weathered surfaces, and from kilns and lime-pits where the action of the lime upon the land had been observed by farmers for some time.

V. On the Chemical and Physical Analyses of Soils,

BY

B. B. PEFFER.

Mr. Pepper examined a large number of soils and subsoils from different geological formations, and from under different topographical conditions and different degrees of agricultural improvement, with a view to tracing the relations between the different considerations thus involved and the peculiarities exhibited by physical analysis.

General Remarks.

In common with all other educational institutions, in the loyal States, the regular quiet of the College course has been at times disturbed by the exciting facts and rumors growing out of the unfortunate condition of our country. Yet, notwithstanding this source of disturbance, the Faculty take pleasure in announcing that the success of the College, as regards the average number of students in attendance, their progress in class, and the general disposition to acknowledge the necessity of moral discipline, and to submit to it, has been more satisfactory than during any preceding session of the College. For the first time an entire session has been passed without any expulsion from College. Most especially should the members of the second and third classes, almost without exception, be honorably noticed, as having by their influence and example done much to produce this state of things.

This honorary notice would also extend to the principal part of the fourth class, and those to whom it would not extend, owe their failings rather to youthful inexperience than to bad motives.

Conclusion.

In conclusion, the officers of the Institution would express their confidence in the practicability of combining manual labor with the acquisition of scientific and literary knowledge, and in the entire success of the enterprise as originally contemplated by the founders of the Institution.

For further particulars in regard to the origin, rise, and progress of the Institution, its terms of admission, &c., the reader is referred to the history of the College, page 64, of this work.

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CORRESPONDENCE, &c.

The session for 1863 will open on Wednesday, the ¹⁸~~22~~ of February and close about the 19th of the following December.

Persons wishing further particulars in reference to the College, will address DR. E. PUGH, Agricultural College, Centre Co., Pa.